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PROVISIONAL AGENDA FOR THE FORTY-SECOND SESSION

To be convened at the United Nations Office at Geneva
on Tuesday, 1 May 1990, at 3 p.m.

1. Organization of work of the session.
2. State responsibility.
3. Jurisdictional immunities of States and their property.
4. Draft Code of Crimes against the Peace and Security of Mankind.
5. The law of the non-navigational uses of international watercourses.
6. International liability for injurious consequences arising out of acts not prohibited by international law.
7. Relations between States and international organizations (second part of the topic).
8. Programme, procedures and working methods of the Commission, and its documentation.
9. Co-operation with other bodies.
10. Date and place of the forty-third session.
11. Other business.





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SIXTH REPORT ON THE LAW OF THE NON-NAVIGATIONAL USES OF
INTERNATIONAL WATERCOURSES

by

Mr. Stephen C. McCaffrey, Special Rapporteur

CONTENTS

	Paragraphs	Page
INTRODUCTION	1	3
I. MANAGEMENT OF INTERNATIONAL WATERCOURSES	2 - 19	3
A. Introduction	2	3
B. State practice	3 - 6	4
C. The work of international organizations	7 - 17	8
D. Conclusion	18 - 19	19
E. The proposed article		20
[PART VIII. MANAGEMENT OF INTERNATIONAL WATERCOURSES]		20
Article [26]. Joint institutional management		20
Comments		21
II. SECURITY OF HYDRAULIC INSTALLATIONS	20 - 36	34
A. Introduction and overview	20 - 22	34

CONTENTS (continued)

	<u>Paragraphs</u>	<u>Page</u>
B. State practice and views of commentators	23 - 35	36
C. The proposed articles	36	44
[PART IX. PROTECTION OF WATER RESOURCES AND INSTALLATIONS]		44
Article [27]. Protection of water resources and installations		44
Comments		45
Article [28]. Status of international watercourses and water installations in time of armed conflict		46
Comments		46
III. IMPLEMENTATION OF THE DRAFT ARTICLES	37 - 39	48
A. Introduction	37 - 39	48
B. The proposed annex		50
ANNEX I. IMPLEMENTATION OF THE DRAFT ARTICLES		50
Article 1. Definition		50
Comments		50
Article 2. Non-discrimination		51
Comments		51
Article 3. Recourse under domestic law		53
Comments		53
Article 4. Equal right of access		55
Comments		55
Article 5. Provision of information		57
Comments		58
Article 6. Jurisdictional immunity		59
Comments		60

INTRODUCTION

1. In his fourth report on the law of the non-navigational uses of international watercourses the present Special Rapporteur set forth a schedule for the submission of remaining material. ^{1/} That schedule indicated that the final chapters of the draft articles, dealing with management of international watercourses, security of hydraulic installations and settlement of disputes, would be submitted to the Commission in 1990. The present report accordingly contains draft articles, together with supporting material, on those subtopics. It also contains a chapter entitled "Implementation of the draft articles", which deals with the facilitation of private remedies for actual or potential harm. The chapter grew out of comments in the Commission and the Sixth Committee, as well as the Special Rapporteur's own research, all of which suggest that all feasible steps should be taken to facilitate private redress as a first, practical step towards implementation of the obligations laid down in the present draft articles.

I. MANAGEMENT OF INTERNATIONAL WATERCOURSES

A. Introduction

2. The subtopic of management of international watercourses - also referred to as administrative arrangements for international watercourse systems - has been treated thoroughly by previous Special Rapporteurs ^{2/} and in various United Nations studies and reports. ^{3/} In his third report, the present Special Rapporteur

^{1/} A/CN.4/412, para. 8.

^{2/} See S. Schwebel, Third report on the law of the non-navigational uses of international watercourses, Yearbook ... 1982, vol. II (Part One), at p. 175, document A/CN.4/348, paras. 452-471 (hereinafter referred to as "S. Schwebel, third report"); and J. Evensen, First report on the law of the non-navigational uses of international watercourses, Yearbook ... 1983, vol. II (Part One), at p. 177, document A/CN.4/367, paras. 131-137 (hereinafter referred to as "J. Evensen, first report"). See also J. Evensen, Second report ..., Yearbook ... 1984, vol. II (Part One), p. 116, document A/CN.4/381, para. 75 (hereinafter referred to as "J. Evensen, second report").

^{3/} See, e.g., United Nations, Management of international water resources: institutional and legal aspects, Natural Resources/Water Series No. 1 (United Nations publication, Sales No. E.75.II.A.2) (1987); ibid., Institutional issues in the management of international river basins: financial and contractual considerations, Natural Resources/Water Series No. 17 (United Nations publication, Sales No. E.87.II.A.16) (1987); ibid., Integrated River Basin Development (United Nations publication, Sales No. E.70.II.A.4) (1970); ibid., Experiences in the development and management of international river and lake basins, Natural Resources/Water Series No. 10 (United Nations publication, Sales No. E.82.II.A.17) (1983); and ibid., River basin management (United Nations publication, Sales No. E.70.II.E.17) (1971).

reviewed the relevant features of a modern system of water-resource management in order to provide a background for the consideration of procedural rules relating to the utilization of international watercourses. 4/ The report described mechanisms for the multi-purpose planning and integrated development of watercourse systems that have been established wholly within one jurisdiction, between different units of a federal system, and on the international level. 5/ In view of the extensive previous coverage of the subtopic, the Special Rapporteur will confine this chapter of the present report to a brief review and update of the authorities that have been surveyed exhaustively in previous reports, 6/ followed by a draft article on the subtopic for the consideration of the Commission.

B. State practice

3. Writing in 1931, Professor H. A. Smith, in his seminal work entitled The Economic Uses of International Rivers, concluded on the basis of his extensive study that a number of principles of international law had emerged from the practice of States with regard to international watercourses:

"The first principle is that every river system 7/ is naturally an indivisible physical unit, and that as such it should be so developed as to render the greatest possible service to the whole human community which it serves, whether or not that community is divided into two or more political jurisdictions. It is the positive duty of every government concerned to co-operate to the extent of its power in promoting this development, though it cannot be called upon to imperil any vital interest or to sacrifice without full compensation and provision for security any other particular interest of its own ..." 8/

4/ Yearbook ... 1987, vol. II (Part One), p. 15, at pp. 17-23, document A/CN.4/406, paras. 6-38.

5/ Ibid.

6/ See especially the portion of Mr. Schwebel's third report referred to in note 2, above.

7/ It is interesting to note that the expression "river system" was used by Smith in a work written relatively early in the present century. The term was also employed by J. Brierly. See, e.g., the fifth edition of his well-known work, The Law of Nations, 5th ed. (Oxford, Clarendon Press, 1955), p. 204. The fact that such a conceptualization of international watercourses is of relatively long standing among students of the subject will be of interest to the Commission in connection with the decision it must ultimately take on the question of whether the draft articles should be based upon the concept of the international watercourse "system".

8/ H. Smith, The Economic Uses of International Rivers (London, 1931), pp. 150 and 151.

One of the principles that flows from this first one, according to Smith, is the following:

"(7) Where the circumstances of any river system are such that questions relating to its proper use are likely to be of frequent occurrence, permanent international commissions should be constituted to deal with all such questions, whenever they may arise." ^{9/}

Indeed, Professor Smith devoted an entire chapter of his work to "The Function of International Commissions". ^{10/} This was hardly a new idea, even in the first third of the twentieth century. Already in 1911, the Institute of International Law recommended:

"that the interested states appoint permanent joint commissions which shall render decisions, or at least shall give their opinion, when, from the building of new establishments or the making of alterations in existing establishments, serious consequences might result in that part of the stream situated in the territory of the other State." ^{11/}

And the practice of States in this regard extends back considerably further in history. For example, the 1754 Treaty of Vaprio between the Empress of Austria, in her capacity as Duchess of Milan, and the Republic of Venice entrusted a pre-existing joint boundary commission with functions relating to the common use of the river Ollia. ^{12/}

4. As has been seen in previous reports, ^{13/} many of the early agreements concerning international watercourse systems, particularly those of the nineteenth century, were especially concerned with the regulation of navigation and fishing.

^{9/} Ibid., at p. 152.

^{10/} Ibid., chap. V, at p. 120.

^{11/} Resolution on "International regulations regarding the use of international watercourses", Annuaire de l'Institut de droit international, Madrid session, April 1911 (Paris, 1911), vol. 24, pp. 365-367, reproduced in Yearbook ... 1974, vol. II (Part Two), p. 200, document A/5409, para. 1071.

^{12/} Parry, The Consolidated Treaty Series, vol. 40, pp. 215-228. See also the 1785 Treaty of Fontainebleau between Germany and the Netherlands, which formed a bipartite body to determine the best sites for joint construction of locks on the River Meuse. Martens, Recueil des Traités, 2nd ed., vol. 4, p. 56, also referred to in the Economic Commission for Europe (ECE) 1952 report, "Legal aspects of hydroelectric development of rivers and lakes of common interest", document E/ECE/136-E/ECE/EP/98/Rev.1, paras. 175 et seq.

^{13/} See, e.g., the survey of international agreements in chapter III.B.1, of the fourth report of the present Special Rapporteur (supra, note 1), paras. 39-48.

The more recent agreements, especially those concluded since the Second World War, have been concerned principally with other aspects of the utilization or development of international watercourse systems, such as the study of the development potential of the watercourse, irrigation, flood control, hydroelectric power generation and pollution. ^{14/} These kinds of uses, pushed to the forefront by intensified demand for water, food and electricity, have necessitated to a much greater degree the establishment of joint institutional mechanisms for the implementation of the various agreements. Today there are nearly as many such joint bodies as there are international watercourses; they may be ad hoc or permanent, and possess a wide variety of functions and powers. ^{15/}

5. A survey of multipartite and bipartite commissions concerned with non-navigational uses of international watercourses compiled by the Secretariat in 1979 ^{16/} lists 90 such bodies. While the largest number of the commissions listed deal with watercourse systems in Europe, ^{17/} every region of the world is represented. Moreover, the number of administrative arrangements in the developing countries, particularly in Africa, was on the rise when the list was prepared:

"It is noteworthy that the newly independent African States have demonstrated a commendable desire to co-operate in fluvial matters through the creation of international river commissions. While in 1959 there was only one international river commission in Africa, the Permanent Joint Technical Commission for the River Nile, eight new river commissions have been established in Africa since then." ^{18/}

^{14/} See the discussion of "Multilateral agreements" in Management of international water resources (supra, note 3), pp. 33-36, especially p. 34.

^{15/} For summary descriptions of some of these agreements, "selected to illustrate the widest possible variety of arrangements", see ibid., annex IV. See also the list of agreements setting up joint machinery for the management of international watercourses in International Law Association (ILA), Report of the Fifty-seventh Conference, Madrid, 1976 (London, 1978), pp. 256-266; Ely and Wolman, "Administration", in The Law of International Drainage Basins (Garretson, Hayton and Olmstead, eds. and contribs., 1966), p. 124; and the discussion following this note. For an extensive list of writings on international river and lake commissions, see S. Schwebel, third report (supra, note 2), footnote 746, at p. 175.

^{16/} Annotated list of multipartite and bipartite commissions concerned with non-navigational uses of international watercourses, April 1979 (unpublished) (hereinafter referred to as "Survey").

^{17/} The survey contains 48 entries for Europe, 23 for the Americas, 10 for Africa and nine for Asia; ibid., at p. ii.

^{18/} Survey (supra, note 16), at p. ii (footnote omitted).

And the trend has continued since these observations were made. 19/

6. The sheer number of commissions and other administrative arrangements that have been established by watercourse States, especially States that use international watercourses most intensively, 20/ suggests that such joint

19/ See, e.g., the agreements contained in Natural Resources/Water Series No. 13, Treaties concerning the utilization of international watercourses for other purposes than navigation, Africa (United Nations publication, Sales No. 84.II.47), in particular the Convention relating to the creation of the Gambia River Basin Development Organization (the Gambia, Guinea and Senegal), 30 June 1978, at p. 42; and the Convention creating the Niger Basin Authority (Benin, Cameroon, Chad, Ivory Coast, Guinea, Mali, Niger, Nigeria and Upper Volta), 21 November 1980. See generally Okidi, "The State and the management of international drainage basins in Africa", Natural Resources Journal, vol. 28 (1988), p. 646; and Krishnamurthy, "The challenge of Africa's water development", Natural Resources Forum, vol. 1 (1977), p. 371.

20/ Prominent examples that come readily to mind are the States sharing the Danube, Ganges, the Great Lakes and other boundary waters between Canada and the United States, the Indus, the Nile, the Plata and the Rhine. See the following agreements: for the Danube, the Convention regarding the régime of navigation on the Danube, 18 August 1948 (Austria, Bulgaria, Hungary, Romania, Czechoslovakia, the Union of Soviet Socialist Republics and Yugoslavia), art. 8, United Nations, Treaty Series, vol. 33, p. 196; reproduced in the United Nations Legislative Series, Legislative Texts and Treaty Provisions concerning the Utilization of International Rivers for Other Purposes than Navigation (Sales No. 63.V.4) (hereinafter referred to as "Legislative Texts ..."); Treaty No. 121, Yearbook ... 1974, vol. II (Part Two), p. 115, document A/5409, para. 470, establishing the Danube Commission; for the Ganges, the Agreement concerning the sharing of the Ganges waters at Farakka, creating the Indo-Bangladesh Joint Committee on sharing the Ganges Waters, International Legal Materials, vol. 17, at p. 1045 (1978); for the Great Lakes and other boundary waters between Canada and the United States, the 1909 Treaty between Great Britain and the United States relating to boundary waters, and questions arising between the United States and Canada, Legislative Texts ..., Treaty No. 79, art. VII, establishing the International Joint Commission of the United States and Canada, discussed in L. Bloomfield and G. Fitzgerald, Boundary Waters Problems of Canada and the United States (the International Joint Commission 1912-1958) (Toronto, 1958); for the Indus, the Indus Waters Treaty, Legislative Texts ..., Treaty No. 98, art. VIII, establishing the Permanent Indus Commission; for the Nile, the Agreement between the United Arab Republic and the Republic of Sudan for the Full Utilization of the Nile Waters (8 November 1959), and Protocol concerning the establishment of the Permanent Technical Committee, United Nations, Treaty Series, vol. 453, p. 75, reproduced in Legislative Texts ..., Treaty No. 34, at p. 143; for the Plata, the joint Declaration of the Foreign Ministers of the States of the Plata River Basin (Argentina, Bolivia, Brazil, Paraguay and Uruguay), summarized in Yearbook ... 1974, vol. II (Part Two), p. 322, document A/CN.4/274, para. 322, establishing the Intergovernmental

/...

institutional mechanisms are a natural and logical outgrowth of heavy reliance upon shared water resources, and the interdependence that is its inevitable by-product. Of perhaps greater significance, one of the resolutions adopted at the United Nations Water Conference at Mar del Plata in 1977, recognizing the intensified demands placed by burgeoning populations upon finite freshwater resources, pointed to "the imperative need for accelerated progress in the investigation and development of water resources, and [their] integrated management for efficient use". 21/ This need is perhaps felt nowhere more acutely than in Africa, where hydrologists have estimated that only approximately 2 per cent of total water resources are being utilized. 22/ Similarly, although "one third of the world's potential hydropower is in Africa[,] ... the ratio of energy generation to the exploitable potential is only 2 per cent." 23/

C. The work of international organizations

7. The emergence of a large number of joint river and lake commissions in recent years may be attributed at least in part to work that has been carried on under United Nations auspices. The theme that emerges from the reports and

(continued)

Co-ordinating Committee of the River Plate; and one of the many commissions established with regard to the Rhine is the International Commission for the Protection of the Rhine against Pollution, established by the Agreement of 29 April 1963 between France, the Federal Republic of Germany, Luxembourg, the Netherlands and Switzerland (the European Economic Community (EEC) became a party in 1976), summarized in Yearbook ... 1974, vol. II (Part Two), p. 301, document A/CN.4/274, para. 138; see also the 1976 Convention on the protection of the Rhine against chemical pollution between the same parties, United Nations, Treaty Series, vol. 1124, p. 375, International Legal Materials, vol. 16, p. 242 (1977).

For lists of agreements that establish joint commissions for the management of international watercourses, see the sources cited in note 15, supra.

21/ United Nations, Report of the United Nations Water Conference, Mar del Plata, 14-25 March 1977 (United Nations publication, Sales No. E.77.II.A.12) (1977), p. 78 (emphasis added). Apart from their principal functions of integrating management and development of international watercourse systems, such joint bodies have also been able to attract financial support from multilateral development banks and other international institutions for projects associated with the development of individual watercourses. See Menon, "Institutional mechanisms for the development of international water resources", Revue belge de droit international, vol. 8 (1972), p. 99.

22/ See Krishnamurthy (supra, note 19), at p. 371; see also Okidi (supra, note 19), at pp. 647 and 648.

23/ Okidi (supra, note 19), at p. 648.

/...

recommendations of these meetings is that, while there is no obligation under general international law to form such bodies, management of international watercourse systems through joint institutions is not only an increasingly common phenomenon, but also a form of co-operation between watercourse States that is almost indispensable if anything approaching optimum utilization and protection of the system of waters is to be attained.

8. A report of the Secretary-General ^{24/} concerning issues before the then newly formed Committee on Natural Resources of the Economic and Social Council reminds us that international watercourses can provide opportunities for strengthening relations between States, and points to the "need" for the establishment of institutional arrangements to that end:

"3. The occurrence of international water resources offers a unique kind of opportunity for the promotion of international amity. The optimum beneficial use of such waters calls for practical measures of international association where all parties can benefit in a tangible and visible way through co-operative action. Water is a vital resource, the benefits from which can be multiplied through joint efforts and the harmful effects of which may be prevented or removed through joint efforts. An incentive towards international co-operation thus demonstrably accompanies the status of co-basin State in an international river basin. Moreover, when plans are made and implemented jointly, valuable experience is gained with international institutions at both the policy and working levels. A characteristic trend in more recent international arrangements for water resources development has been the broadening of the scope and diversity of the parties' international water development activities. New dimensions are being added to the traditional organizational patterns developed in Europe and in North America, which were largely based on single-purpose and non-consumptive uses of the international rivers.

"...

"The need for new institutional solutions

"12. As the pressure rises for more extensive development and use of international water resources, and the potential for conflict and the need for co-operation becomes every day more evident, water administrators, political leaders, regional planners and international lawyers are called upon to devise improved institutional frameworks capable of coping with the increased requirements for international co-operation. New flexible and broad-based channels of communication are needed between countries embarking upon the development and use of international water resources and those organizations and individuals having experience and information in these fields.

^{24/} E/C.7/2/Add.6, reproduced in part in Yearbook ... 1974, vol. II (Part Two), p. 328, document A/CN.4/274, para. 334.

/...

"13. The range of alternative institutional arrangements is impressive. It includes, for instance, the mere nomination of one official in each country who is empowered to exchange data or even development plans for a specific purpose; or it may entail the establishment of an international basin agency with its own professional staff, technical services and an intergovernmental governing body.

"14. Institutional arrangements should be responsive to the specific co-ordination requirements in each case. Taking a long-term perspective, flexibility is also necessitated by the changing demands for water, the nature and characteristics of the resource base, and by other dynamic environmental influences."

9. The efforts of international organizations to encourage watercourse States to build institutions for the management of international watercourses may be illustrated by way of the following examples.

10. The United Nations Conference on the Human Environment (Stockholm, 1972) recommended that States consider the formation of joint institutional arrangements and provided an inventory of possible functions of such bodies:

"It is recommended that Governments concerned consider the creation of river-basin commissions or other appropriate machinery for co-operation between interested States for water resources common to more than one jurisdiction.

"...

"(c) Such arrangements, when deemed appropriate by the States concerned, will permit undertaking on a regional basis:

"(i) Collection, analysis and exchange of hydrologic data through some international mechanism agreed upon by the States concerned;

"(ii) Joint data-collection programmes to serve planning needs;

"(iii) Assessment of environmental effects of existing water uses;

"(iv) Joint study of the causes and symptoms of problems related to water resources, taking into account the technical, economic and social considerations of water quality control;

"(v) Rational use, including a programme of quality control, of the water resource as an environmental asset;

"(vi) Provision for the judicial and administrative protection of water rights and claims;

"(vii) Financial and technical co-operation [in the case] of a shared resource;

/...

"(d) Regional conferences should be organized to promote the above considerations." 25/

11. A recommendation of the Committee on Natural Resources of the Economic and Social Council 26/ led ultimately to the convening of the United Nations Water Conference at Mar del Plata, Argentina, from 14 to 25 March 1977. 27/ In addition to the numerous recommendations concerning management of shared water resources, 28/ the Conference adopted a resolution on "River commissions" which recommended that the Secretary-General explore:

"the possibility of organizing meetings between representatives of existing international river commissions involved that have competence in the management and development of international waters, with a view to developing a dialogue between the different river basin organizations on potential ways of promoting the exchange of their experiences. Representatives from individual countries which share water resources but yet have no established basin-wide institutional framework should be invited to participate." 29/

25/ Report of the United Nations Conference on the Human Environment, Stockholm, 5-16 June 1972 (United Nations publication, Sales No. E.73.II.A.14), chap. II, "Action Plan for the Human Environment", recommendation 51. See also the Principles of conduct in the field of the environment for the guidance of States in the conservation and harmonious utilization of natural resources shared by two or more States, "approved" in decision 6/14 of the Governing Council of the United Nations Environment Programme (UNEP) of 19 May 1978; and taken note of by General Assembly resolution 34/186, adopted on 18 December 1979, entitled "Co-operation in the field of the environment concerning natural resources shared by two or more States". The UNEP Principles recommend that "States consider the establishment of institutional structures, such as joint international commissions, for consultations on environmental problems relating to the protection and use of shared natural resources"; *ibid.*, principle 2. For the background and text of the UNEP Principles, and discussion of General Assembly action concerning them, see the note presented by Mr. Constantin A. Stavropoulos, document A/CN.4/L.353, Yearbook ... 1983, vol. II (Part One), p. 195.

26/ Official Records of the Economic and Social Council, Fifty-fourth Session, Supplement No. 4, document E/5247, para. 114.

27/ For a discussion of the background of the Conference, see Yearbook ... 1974, vol. II (Part Two), p. 329, document A/CN.4/274, para. 336.

28/ See Report of the United Nations Water Conference (supra, note 21), e.g., pp. 7-9, 32 and 33 and 51-57.

29/ See Report of the United Nations Water Conference (supra, note 21), resolution VII, p. 77.

/...

12. That resolution led to the convening of a series of such conferences, the first of which was the United Nations Interregional Meeting of International River Organizations, held at Dakar in 1981. The following conclusions of the Meeting concerning "Institutional and legal arrangements" contain important lessons that have been distilled from the experience of watercourse States having joint administrative machinery:

"4. Where it is the intention of States to establish a permanent or ad hoc international organization for the management of shared water resources to reflect the common interests involved, the agreement establishing this organization should at least contain, within the framework of principles of international water law acceptable to the contracting States, the following elements, which should be defined as clearly as possible:

Objectives

Territorial jurisdiction

Composition

Authority and power

Decision-making procedures

Financial provisions

Procedures for the prevention and settlement of disputes.

"5. ... [I]n view of the hydrologic unity of the drainage basins, it would be desirable that integrated development programmes be drawn and possibly executed at the basin level by recognized agencies. Where this approach was not viable, co-ordination of the activities of the various agencies concerned should be sought.

"6. ... [C]oncerning the composition of administrative, managerial and technical personnel, it was felt that technical matters should be dealt with by specialists, that diplomats should assist them where problems arose and that the activities of both groups should complement one another.

"7. ... With regard to internal decision-making ... the decision-making processes of international river basin agencies vary and provision should be made in the agreement to ensure the effectiveness of decisions taken." 30/

30/ United Nations, Experiences in the Development and Management of International River and Lake Basins, Natural Resources/Water Series No. 10 (United Nations publication, Sales No. E.82.II.A.17), pp. 9 and 10, para. 28. See also the conclusions under topic II, "Progress in co-operative arrangements", particularly conclusions 1, 3, 4, 5, 6 and 8, ibid., pp. 14 and 15; and conclusions 3 and 4 under topic III, "Economic and other considerations", ibid., p. 19.

13. More recently, an Interregional Meeting on River and Lake Basin Development, with emphasis on the Africa region, was held at Addis Ababa from 10 to 16 October 1988. ^{31/} Among the recommendations adopted by that meeting are the following:

"The meeting recommended that national Governments and, where applicable, river basin organizations take action to implement the following proposals for improved resource assessment and for the integrated planning of multi-sectoral river basin development and management.

"...

"2. Develop and implement systems and institutional arrangements for the collection and storage of data relevant to river and lake basin projects, providing for and stimulating information exchange and access to data among concerned parties, for the better planning and management of basin resources. This should be supplemented by periodically updated programmes of priorities for data collection and networks in support of phased basin plans." ^{32/}

14. Concerning "legal and institutional aspects", the meeting recommended that:

"1. Governments recognize that basin organizations are important and influential prime movers in the development process, and that Governments accord due importance to them and to enabling legislation which should provide for high-calibre personnel in both the policy-making and the technical bodies.

"2. Governments recognize that the system approach to the management of a basin's water resources is the necessary point of departure for regulating and managing the resources, given the interdependence and diversity of the components of the hydrological cycle - surface water, underground water, the water-atmosphere interface and the freshwater-marine interface.

"3. Governments apply the general principles of international law applicable to the water resources which include, inter alia, the right of each basin State to an equitable utilization and the duty not to cause appreciable harm to a co-basin State (including to the environment), and recognize the duty to exchange available relevant information and data, the duty to notify and to consult reciprocally with co-basin States that may be adversely affected by a project or programme planned by one or more basin States and the duty to

^{31/} See United Nations, Economic Commission for Africa, Department of Technical Co-operation for Development, Interregional Meeting on River and Lake Development, with emphasis on the Africa region, Addis Ababa, Ethiopia, 10-16 October 1988, Report of the Meeting, document ECA/NRD/IMRLBD/42, 14 October 1988.

^{32/} Ibid., Report of the Meeting, document ECA/NRD/IMRLBD/42, pp. 35 and 36.

/...

consult concerning the institutionalization of co-operation or collaboration for basin development upon the request of any other basin States ..." 33/

The meeting also noted that river basin development strategies over the past 20 years have met with varying (and sometimes limited) success. In particular, the following factors were identified as having prevented administrative management schemes from achieving their full potential:

"(a) In relation to the wide-ranging objectives for socio-economic development, the mandates and the scope of work entrusted to river basin organizations may be too restrictive to permit their timely, effective and flexible functioning;

"(b) Institutional instruments and arrangements available to river basin organizations have proved inadequate;

"(c) River basin organizations have adopted unsuitable working methods;

"(d) There has been insufficient harmonization and co-ordination of work between river basin organizations and their respective national Governments;

"(e) Member States have not given adequate financial support to river basin organizations;

"(f) Both financial and human resources have been insufficient;

33/ Ibid., pp. 36 and 37. An asterisked note to this recommendation reads as follows:

"(During the plenary session, several participants expressed reservations on this recommendation and stated that, even where there is a moral obligation to exchange data or to consult reciprocally, this must proceed on the basis of agreement.)"

While it is relevant to the Commission's work on the topic as a whole, the note does not appear to indicate that any reservations were expressed with regard to the subtopic currently under consideration, i.e., the portion of the recommendation concerning "the institutionalization of co-operation or collaboration for basin development ..."

Also of interest in connection with the present subtopic is the recommendation immediately following those quoted in the above text:

"Governments realize that a basin State's right to an equitable share in the uses of the waters of an international drainage basin may be conditional upon that State's willingness, on a reciprocal basis, to participate affirmatively in the reasonable measures and programmes necessary to keep the system of waters in good order (equitable participation) ..."

/...

"(g) There has been unnecessary overlapping and a lack of harmonization between the work of river basin organizations and that of various subregional organizations engaged in the planning and implementation of joint development programmes and projects;

"(h) Local participation has been inadequate at all stages of project conception, planning and implementation;

"(i) In some instances of project implementation, there has been an imbalance between the involvement of member States and donors, sometimes with a lack of co-ordination among donors." 34/

15. The subject of joint institutional management of international watercourses has also been addressed by the Economic Commission for Europe (ECE). Once again, a recommendation was made that watercourse States consider the establishment of joint commissions. Specifically in its recent resolution on "Principles regarding co-operation in the field of transboundary waters", ECE made the following recommendations concerning joint administrative mechanisms:

"6. Riparian countries should consider the setting up, where not yet existent, of appropriate institutional arrangements such as joint commissions and working groups, as a means of promoting the objectives of the agreement and facilitating implementation of its provisions. The structure, task, competence and financing of joint commissions or other co-operating bodies should be defined in the agreement.

"6 (a). The formal character, functions and geographical and substantive scope of activity of the commission should be adjusted to the prevailing conditions in the best possible way. Existing national structures and legal provisions in the contracting countries, as well as intergovernmental structures, should be fully taken into account together with hydrological, environmental, economic and other relevant conditions.

"6 (b). Where institutional arrangements are already set up, contracting parties should make full use of them by providing all necessary means for the efficient implementation of their tasks.

"6 (c). The commissions, working groups or other institutional arrangements should be composed of delegations appointed for this purpose by the individual contracting parties. Commissions should have their own rules of procedure for their work. Commissions should have the right to seek advice from experts and scientific institutes and to appoint ad hoc or permanent working groups.

"6 (d). In the case of small projects of limited duration, ad hoc working groups could be set up by contracting parties to deal with specific concerns in common. Where the scope of the activities is broader and the project more

34/ Ibid., pp. 41 and 42.

protracted in nature, joint commissions should be established, if necessary with permanent secretariats." 35/

16. In the mid-1970s two important studies were produced concerning the management of international water resources through joint institutional arrangements. The first was a report prepared by the United Nations Panel of Experts on the Legal and Institutional Aspects of International Water Resources Development. 36/ The following findings of the Panel indicate developments in recent State practice and point to the increasing significance of joint administrative management of international watercourses:

"557. ... The recent arrangements with respect to the Nile, the Indus, the Niger, the Senegal, the Plata, the Lower Mekong and the Yarmuk basins constitute serious attempts to realize mutual co-operation and collaboration for joint development and conservation of international water resources. These agreements, among others, reflect the growing acceptance of the principles of regional international planning for the achievement of interdependent national interests.

35/ See the report containing "Resolutions and other decisions adopted by the forty-second session of the Economic Commission for Europe", E/ECE/(42)/L.19, pp. 16 and 17. See also the recent report, "Ecosystems approach to water management", ENVWA/WP.3/R.7/Rev.1, prepared by government rapporteurs at an informal meeting held from 5 to 7 June 1989 at Bergen, Norway. The report was submitted to the third session, 11-14 December 1989, of the ECE Senior Advisers to ECE Governments on Environmental and Water Problems, Working Party on Water Problems. It contains a chapter on "Application of the ecosystems approach to water management" which addresses, *inter alia*, "Institutional arrangements", "Planning", "Impact assessments", "Ecosystem evaluation", "Monitoring", "Ecological forecasting, simulations and modelling" and "Public participation and education".

Also of interest is the ongoing work of the Economic and Social Commission for Western Asia (ESCWA) in this field. A working paper prepared for the *Ad Hoc* Expert Group Meeting on Water Security in the ESCWA Region, 13-16 November 1989, recommends, as part of a proposed "Water Strategy Action Plan", the establishment of an "institutional framework for water resources development, conservation and management" (E/ESCWA/NR/89/WG.3/WP.5, p. 17). The paper also notes that ESCWA has proposed the establishment of a "Regional Water Resources Council", an "institutional arrangement for the promotion of regional/subregional co-operation among the water resources governmental authorities in the field of water resources development in the ESCWA region" (*ibid.*, at p. 21).

36/ United Nations, Management of International Water Resources (*supra*, note 3). The study was designed as "a forward-looking consultation manual systematically setting forth and discussing the range of available legal and organizational alternatives" (*ibid.*, p. iii (preface)).

"558. Mutual co-operation of riparian States ... has in many cases led to a more efficient exploitation than otherwise would be possible. Investigation of the multiple-use potentials and the hydrological effects of water resources works considered in the context of the basin, rather than in the national context alone, has led to development schemes of significant net benefit to all States concerned. The exchange of hydrological and other data, the co-ordinated or joint construction and operation of projects such as dams and river training works and the sharing of the costs of such undertakings have been the subject-matter of numerous successful international arrangements.

"...

"561. Given these varying national circumstances and the individuality of each international water resources system, it remains for the co-system States to fashion the specific legal régime and institutional arrangements best suited to their purposes and capabilities. Existing international law and international practice, however, are the proper points of departure ..." 37/

17. The second comprehensive study from the 1970s was prepared by the Committee on International Water Resources Law of the International Law Association (ILA). At its Fifty-seventh Conference in 1976, ILA approved a set of draft articles on international water resources administration with guidelines for the establishment of international water resources administration. These articles read as follows:

"Article 1

"As used in this chapter, the term 'international water resources administration' refers to any form of institutional or other arrangement established by agreement among two or more basin States for the purpose of dealing with the conservation, development and utilization of the waters of an international drainage basin.

"Article 2

"1. With a view to implementing the principle of equitable utilization of the waters of an international drainage basin and consistent with the provisions of Chapter VI [of the Helsinki Rules] relating to the procedures for the prevention and settlement of disputes, the basin States concerned and interested should negotiate in order to reach agreement on the establishment of an international water resources administration.

"2. The establishment of an international water resources administration in accordance with paragraph 1 above is without prejudice to the existence or subsequent designation of any joint agency, conciliation commission or tribunal formed or referred to by co-basin States pursuant to article XXXI [of the Helsinki Rules] in the case of a question or dispute relating to the present or future utilization of the waters of an international drainage basin.

37/ *Ibid.*, p. 175.

/...

"Article 3

"Member States of an international water resources administration in appropriate cases should invite other States, including non-basin States or international organizations, which by treaty, other instrument or binding custom enjoy a right to, or have an interest in, the use of the waters of an international drainage basin, to participate in the activities of the international water resources administration.

"Article 4

"1. In order to provide for an effective international water resources administration the agreement establishing that administration should expressly state, among other things, the objective or purpose, nature and composition, form and duration, legal status, area of operation, functions and powers, and financial implications of such an international water resources administration.

"2. The Guidelines annexed to these articles should be taken into account when an international water resources administration is to be established." 38/

These articles, adopted 10 years after the promulgation of ILA's Helsinki Rules, represent a distinct step forward in their approach to joint administration international watercourses. While the Helsinki Rules treated the subject in the context of "Procedures for the prevention and settlement of disputes", 39/ the above articles focus clearly on the management function of such joint bodies.

38/ ILA, Report of the Fifty-seventh Conference ..., p. xxxvii. The "Guidelines for the establishment of an international water resources administration" referred to in article 4, paragraph 2, are set forth in ibid., pp. 253-256. For the report of the Committee on Water Resources Law on this topic, D. A. Caponera, Rapporteur, see ibid., at pp. 239-266. The report contains, inter alia, a "List of agreements setting up a joint machinery for international drainage basin water resources management" by continent (ibid., at pp. 256-266).

39/ Article XXXI of the Helsinki Rules, which is contained in chapter 6, "Procedures for the prevention and settlement of disputes", reads as follows:

"1. If a question or dispute arises which relates to the present or future utilization of the waters of an international drainage basin, it is recommended that the basin States refer the question or dispute to a joint agency and that they request the agency to survey the international drainage basin and to formulate plans or recommendations for the fullest and most efficient use thereof in the interests of all such States.

"2. It is recommended that the joint agency be instructed to submit reports on all matters within its competence to the appropriate authorities of the member States concerned.

D. Conclusion

18 The foregoing survey began by noting the conclusion of Professor H. A. Smith that watercourse States should establish permanent joint commissions where questions relating to the proper use of a watercourse are likely to occur frequently. The international agreements and studies reviewed above go further than this, however, recognizing a need for such institutions not only to resolve questions that may arise as to utilization of an international watercourse, but also to engage in affirmative development and protection of the international watercourse system. The late Professor James L. Brierly reached a similar conclusion:

"[I]t is increasingly recognized that, for international rivers of any size, some form of joint international administration will almost certainly be needed if the resources of the river system are to be put to the fullest use for the benefit of all the riparian States ..." 40/

(continued)

"3. It is recommended that the member States of the joint agency in appropriate cases invite non-basin States which by treaty enjoy a right in the use of the waters of an international drainage basin to associate themselves with the work of the joint agency or that they be permitted to appear before the agency."

ILA, Report of the Fifty-second Conference, Helsinki, 1966 (London, 1967), at p. 524.

40/ J. L. Brierly, The Law of Nations (H. Waldock, 6th ed., Oxford, Clarendon Press, 1963), p. 233. See also Brierly's first edition (Oxford, 1928), at p. 123. A number of other publicists have also recognized such a need. See, e.g., Florio, "Sur l'utilisation des eaux non maritimes en droit international", in Festschrift für F. Berber (Berlin 1973), p. 156; B. Chauhan, "Management of international water resources through international water resources commissions", in Proceedings of the annual seminar of the Indian Branch of the ILA (New Delhi, 1973); and Hayton and Utton, "Transboundary Groundwaters: The Bellagio Draft Treaty", Natural Resources Journal, vol. 29 (1989), p. 663 (see especially article III, "The Commission Responsible under this Agreement", at p. 684). For a survey of the literature on the subject, see S. Schwebel, third report, (supra, note 2), note 746, at pp. 175 and 176.

Scientists have reached similar conclusions: "Only international co-operation in the integrated management of water resources can ameliorate [problems of short supply and pollution]." Scientific American, special issue, "Managing Planet Earth", at p. 4, summarizing la Riviere, "Threats to the World's Water", at p. 80.

19. Studies by international organizations and individual publicists recognize that the generality and flexibility of the "equitable utilization" rule (enshrined in article 6), while its principal virtues, at the same time require close co-operation, including regular communication, for its effective implementation. International agreements providing for the establishment of joint watercourse commissions reflect a recognition of this fact. The need for co-operation between watercourse States is addressed generally in articles 9 (General obligation to co-operate) and 10 (Regular exchange of data and information), and more specifically in part III of the draft articles, entitled "Planned measures". While the Special Rapporteur proposes further below in the present report the addition to the draft articles of an annex on implementation, the article submitted in the present chapter could itself be viewed as a form of implementation of the draft articles. ^{41/} By encouraging the formation of permanent institutions for the management of international watercourses, the article provides for a practical context within which watercourse States can work together in planning and monitoring the utilization, protection and development of their joint water resources.

E. The proposed article

[PART VIII. MANAGEMENT OF INTERNATIONAL WATERCOURSES]

Article [26]

Joint institutional management

1. Watercourse States shall enter into consultations, at the request of any of them, concerning the establishment of a joint organization for the management of an international watercourse [system].

2. For the purposes of the present draft article, the term "management" includes, but is not limited to, the following functions:

- (a) Implementation of the obligations of the watercourse States under the present draft articles, in particular the obligations under parts II and III of the draft articles;
- (b) Facilitation of regular communication, and exchange of data and information;

^{41/} Joint watercourse commissions could implement not only the general obligations of equitable utilization and participation (article 6), co-operation (article 9), sharing of data and information (article 10) and notification, consultation and negotiation with regard to planned measures (articles 11-21), but also those concerning avoidance of appreciable harm (article 8) and [watercourse] [system] agreements (articles 4 and 5).

- (c) Monitoring international watercourse[s] [systems] on a continuous basis;
- (d) Planning of sustainable, multi-purpose and integrated development of international watercourse[s] [systems];
- (e) Proposing and implementing decisions of the watercourse States concerning the utilization and protection of international watercourse[s] [systems]; and
- (f) Proposing and operating warning and control systems relating to pollution, other environmental effects of the utilization of international watercourse[s] [systems], emergency situations, or water-related hazards and dangers.

3. The functions of the joint organization referred to in paragraph 1 may include, in addition to those mentioned in paragraph 2, inter alia:

- (a) Fact-finding and submission of reports and recommendations in relation to questions referred to the organization by watercourse States; and
- (b) Serving as a forum for consultations, negotiations and such other procedures for peaceful settlement as may be established by the watercourse States.

Comments

(1) The heading of part VIII and article [26] have been placed in square brackets for two reasons. First, the numbering of this "part" and the draft article it contains is provisional only; it follows the projected outline submitted in the fourth report (A/CN.4/412, para. 7). And secondly, as the Special Rapporteur indicated in the fourth report, the present and the following subtopics are ones that could, in his judgement, be dealt with in the draft articles themselves or in an annex. If the Commission decides to place them in annexes, they would be renumbered accordingly.

(2) In large measure, draft article [26] parallels the articles on the same subtopics that were submitted by two former Special Rapporteurs, Messrs. Evensen and Schwebel. These earlier articles are sufficiently different in approach, when compared both to draft article [26] and to each other, that they are set forth here as points of reference for members of the Commission in their consideration of draft article [26]. The draft article submitted by Mr. Schwebel reads as follows:

"Article 15. Administrative management

"At the request of any system State and where the economic and social needs of the region are making substantial or conflicting demands on water resources, or where the international watercourse system requires protection or control measures, the system States concerned shall enter into negotiations

/...

with a view to the establishment of permanent institutional machinery, or to the strengthening of any existing organization, for the purpose of expanding their consultations, of preparing or implementing their decisions taken with respect to the international watercourse system, and of promoting rational, optimum utilization, protection and control of their shared water resources." 42/

The draft article submitted by Mr. Evensen reads as follows:

"Article 15. Management of international watercourses

"Establishment of commissions

"1. Watercourse States shall, where it is deemed practical and advisable for the rational administration, management, protection and control of the waters of an international watercourse, establish permanent institutional machinery or, where expedient, strengthen existing organizations or organs in order to establish a system of regular meetings and consultations, to provide for expert advice and recommendations and to introduce other processes and decision-making procedures for the purposes of promoting effective and friendly co-operation between the watercourse States concerned with a view to enhancing optimum utilization, protection and control of the international watercourse and its waters.

"2. To this end, watercourse States should establish, where practical, bilateral, multilateral or regional joint watercourse commissions and agree upon the mode of operation, financing and principal tasks of such commissions.

"Such commissions may, inter alia, have the following functions:

"(a) To collect, verify and disseminate information and data concerning utilization, protection and conservation of the international watercourse or watercourses;

"(b) To propose and institute investigations and research concerning utilization, protection and control;

"(c) To monitor the international watercourse on a continuous basis;

"(d) To recommend to watercourse States measures and procedures necessary for the optimum utilization and the effective protection and control of the watercourse;

"(e) To serve as a forum for consultations, negotiations and other procedures for peaceful settlement entrusted to such commissions by watercourse States;

"(f) To propose and operate control and warning systems with regard to

42/ S. Schwebel, third report (supra, note 2), at p. 181.

pollution, other environmental effects of water uses, natural hazards or other hazards which may cause damage or harm to the rights or interests of watercourse States." 43/

(3) A review of treaty provisions concerning institutional arrangements reveals that watercourse States have established a wide variety of such organizations. Some agreements deal only with a particular watercourse, while others cover a number of watercourses forming and crossing common boundaries. The powers vested in the respective commissions are tailored to the subject-matter of the individual agreement. Thus, the competence of a joint body may be defined rather specifically where a single watercourse is involved, and more generally where the agreement covers a series of boundary rivers, lakes and aquifers. Draft article [26] is cast in terms that are intended to be sufficiently general to be appropriate for a framework agreement. At the same time, the article is designed to provide guidance to watercourse States with regard to the powers and functions that could be entrusted to such joint institutions as they may decide to establish. The drafting of article [26] was largely inspired by international agreements establishing joint institutions for the management of watercourses. Representative examples of such agreements follow. They are drawn from treaties relating to the River Niger, the "Indus system of rivers", 44/ and the "boundary waters" 45/ between Canada and the United States.

- (a) Convention creating the Niger Basin Authority, 21 November 1980 (Benin, Cameroon, Chad, Ivory Coast, Guinea, Mali, Niger, Nigeria, Upper Volta) 46/

"CHAPTER II

"AIM AND OBJECTIVES OF THE AUTHORITY

"Article 3: Aim

"1. The aim of the AUTHORITY is to promote the co-operation among member States and to ensure an integrated development of the Niger Basin in all fields, by developing its resources particularly in the fields of energy,

43/ J. Evensen, second report (supra, note 2), at p. 116 (emphasis deleted).

44/ This is the expression utilized in the preamble to the Indus Waters Treaty between India and Pakistan of 19 September 1960 (Legislative Texts ..., Treaty No. 98, p. 300).

45/ This is the expression utilized in the 1909 Boundary Waters Treaty between Canada and the United States in, e.g., the Preliminary Article, Legislative Texts ..., Treaty No. 79, p. 260.

46/ This Convention transforms the former "River Niger Commission" into the "Niger Basin Authority". Convention creating the Niger Basin Authority, preamble, and article 1, Natural Resources/Water Series No. 13 (supra, note 19), Treaty No. 13, at p. 56.

water resources, agriculture, animal husbandry, fishing and fisheries, forestry exploitation, transport, communications and industry.

"2. In pursuance of the purpose mentioned in the preceding paragraph, the action of the AUTHORITY shall be directed to the harmonization of national development policies in the Basin through the implementation of integrated development projects and programmes.

"Article 4: Objectives

"1. The AUTHORITY shall be responsible for:

"(a) The harmonization and the co-ordination of national development policies, in order to ensure an equitable policy as regards sharing of the water resources among member States.

"(b) The formulation, in agreement with the member States, of the general policy of the development of the Basin which shall be consistent with the international status of the River Basin.

"(c) The elaboration and the execution of an integrated development plan of the Basin.

"(d) The initiating and monitoring of an orderly and rational regional policy for the utilization of the surface and underground waters in the Basin.

"(e) The designing and conduct of studies, research and surveys.

"(f) The formulation of plans, the construction, exploitation and maintenance of structure and projects realized within the general objectives of the integrated development of the Basin.

"2. For the purpose set out in the above paragraph (1) the "AUTHORITY" shall notably undertake, in harmony with the development plans of States relating to the Niger Basin and in accordance with the general objectives of integrated development of the Basin, the following activities:

"(a) Statistics and planning

(i) Collection, centralization, standardization, exploitation, dissemination, exchange of technical and related data;

(ii) Co-ordination of plans, projects and research carried out in the member States;

(iii) Consideration of projects presented by the member States with a view to making recommendations on co-ordinated programmes of research and implementation;

/...

- (iv) Monitoring of research and works undertaken by member States and subsequent exploitation of reports which such States should submit periodically;
- (v) Drawing up a master plan and an integrated development programme of the Basin with an identification, at the various stages of the programme, of priorities among alternative uses, projects and sectors.

"(b) Infrastructure

- (i) Designing, study and construction of hydraulic multi-purpose structures of all types and sizes;
- (ii) Designing, study and construction of works, plants and projects in the fields of transports and communications;
- (iii) Improvement and maintenance of navigable waterways;
- (iv) Development of river transport and promotion of an integrated multi-model transport system (sea-river-rail-road) as a factor of integration and for opening up the land-locked Sahelian member States.

"(c) Water control and utilization

- (i) Regulation of the flow and drainage of the main waterway;
- (ii) Flood control;
- (iii) Construction and maintenance of dikes;
- (iv) Prevention and control of drought and desertification;
- (v) Prevention of soil erosion and sedimentation;
- (vi) Setting up of structures and works for land development including salt water and drainage control.

"(d) Environment control and preservation

- (i) Protection of the environment comprising the establishment of norms and measures applicable to the States in the alternative uses of waters in the Basin;
- (ii) Flood control;
- (iii) Construction and maintenance of dikes;
- (iv) Prevention and control of drought and desertification;

/...

- (v) Prevention and control of soil erosion and sedimentation;
- (vi) Setting up of structures and works for land development including salt water and drainage control.

"(e) Navigation control and regulation

"The control and the rules of all forms of navigation on the River, its tributaries and sub-tributaries are governed by the principles laid down in the Act of Niamey relating to the Navigation and the Economic Co-operation among the states of the Niger Basin, signed at Niamey in 1963.

"(f) Land and agro-pastoral development

- (i) Development of food crops;
- (ii) Development of agro-pastoral, fishery and forestry resources;
- (iii) Implementation of programmes allowing the rational use of waters for domestic, industrial, agricultural and pastoral purposes.

"(g) Financing the projects and works

"Applying for financial and technical assistance on a bilateral, multilateral or international basis for carrying out studies and works for the development of the Niger River Basin and to that effect concluding agreements, provided that agreements involving financial commitments for the member States become effective only after approval by the Council of Ministers.

"3. The terms, conditions and statutory provisions to be defined with the view to achieving the objectives as stated in paragraph (2) above, shall be, if necessary and in each case, provided for in riders which shall be annexed to the Convention of which they shall form an integral part.

"4. The member States pledge to keep the Executive Secretariat informed of all the projects and works they might intend to carry out in the Basin.

"Moreover, they pledge not to undertake any work on the portion of the river, its tributaries and sub-tributaries under their territorial jurisdiction which pollute the waters or modify the biological features of the fauna and the flora.

"CHAPTER III

"THE INSTITUTIONS OF THE AUTHORITY

"Article 5: Institutions

"1. The Institutions of the AUTHORITY shall be as follows:

- (a) The Summit of Heads of State and Government;
- (b) The Council of Ministers;
- (c) The Technical Committee of Experts;
- (d) The Executive Secretariat and its specialized organs." 47/

(b) Indus Waters Treaty, 19 September 1960 (India and Pakistan) 48/

"Article VIII: Permanent Indus Commission

"(1) India and Pakistan shall each create a permanent post of Commissioner for Indus Waters, and shall appoint to this post, as often as a vacancy occurs, a person who should ordinarily be a high-ranking engineer competent in the field of hydrology and water-use. Unless either Government should decide to take up any particular question directly with the other Government, each Commissioner will be the representative of his Government for all matters arising out of this Treaty, and will serve as the regular channel of communication on all matters relating to the implementation of the Treaty, and, in particular, with respect to:

- (a) The furnishing or exchange of information or data provided for in the Treaty; and
- (b) The giving of any notice or response to any notice provided for in the Treaty.

47/ Ibid., pp. 58-60. For other examples of agreements between African States creating joint watercourse commissions, see the Convention portant création de l'Organisation pour la mise en valeur du fleuve Sénégal, 11 Mars 1972 (Mali, Mauritania and Senegal), Natural Resources/Water Series No. 13 (*supra*, note 19), Treaty No. 7, at p. 21; and two agreements concerning the Lake Chad Basin Commission, the Convention and Statutes relating to the Development of the Chad Basin, 22 May 1964 (Cameroon, Chad, Niger, Nigeria), ibid., Treaty No. 4, at p. 8, and the Accord portant création d'un fonds de développement de la Commission du bassin du Tchad, 10 Octobre 1973, ibid., Treaty No. 8, p. 29.

48/ Legislative Texts ..., Treaty No. 98, p. 300.

/...

"(2) The status of each Commissioner and his duties and responsibilities towards his Government will be determined by that Government.

"(3) The two Commissioners shall together form the Permanent Indus Commission.

"(4) The purpose and functions of the Commission shall be to establish and maintain co-operative arrangements for the implementation of this Treaty, to promote co-operation between the Parties in the development of the waters of the Rivers and, in particular,

- (a) To study and report to the two Governments on any problem relating to the development of the waters of the Rivers which may be jointly referred to the Commission by the Two Governments: in the event that a reference is made by one Government alone, the Commissioner of the other Government shall obtain the authorization of his Government before he proceeds to act on the reference;
- (b) To make every effort to settle promptly, in accordance with the provisions of Article IX (1), any question arising thereunder;
- (c) To undertake, once in every five years, a general tour of inspection of the Rivers for ascertaining the facts connected with various developments and works on the Rivers;
- (d) To undertake promptly, at the request of either Commissioner, a tour of inspection of such works or sites on the Rivers as may be considered necessary by him for ascertaining the facts connected with those works or sites; and
- (e) To take, during the Transition Period, such steps as may be necessary for the implementation of the provisions of Annexure H.

"(5) The Commission shall meet regularly at least once a year, alternately in India and Pakistan. This regular annual meeting shall be held in November or in such other month as may be agreed upon between the Commissioners. The Commission shall also meet when requested by either Commissioner.

"(6) To enable the Commissioners to perform their functions in the Commission, each Government agrees to accord to the Commissioner of the other Government the same privileges and immunities as are accorded to representatives of member States to the principal and subsidiary organs of the United Nations under Sections 11, 12 and 13 of Article IV of the Convention on the Privileges and Immunities of the United Nations (dated 13th February 1946) during the periods specified in those Sections. It is understood and agreed that these privileges and immunities are accorded to the Commissioners not for the personal benefit of the individuals themselves but in order to safeguard the independent exercise of their functions in connection with the Commission; consequently, the Government appointing the Commissioner not only has the right but is under a duty to waive the immunity of its Commissioner in any

/...

case where, in the opinion of the appointing Government, the immunity would impede the course of justice and can be waived without prejudice to the purpose for which the immunity is accorded.

"(7) For the purposes of the inspections specified in Paragraph (4) (c) and (d), each Commissioner may be accompanied by two advisers or assistants to whom appropriate facilities will be accorded.

"(8) The Commission shall submit to the Government of India and to the Government of Pakistan, before the first of June of every year, a report on its work for the year ended on the preceding 31st of March, and may submit to the two Governments other reports at such times as it may think desirable.

"(9) Each Government shall bear the expenses of its Commissioner and his ordinary staff. The cost of any special staff required in connection with the work mentioned in Article VII (1) shall be borne as provided therein.

"(10) The Commission shall determine its own procedures.

"Article IX: Settlement of differences and disputes

"(1) Any question which arises between the Parties concerning the interpretation or application of this Treaty or the existence of any fact which, if established, might constitute a breach of this Treaty shall first be examined by the Commission, which will endeavour to resolve the question by agreement.

"..." 49/

- (c) Treaty between Great Britain and the United States relating to boundary waters, and questions arising between the United States and Canada, 11 January 1909 50/

"Article VII. The High Contracting Parties agree to establish and maintain an International Joint Commission of the United States and Canada, composed of six commissioners, three on the part of the United States, appointed by the President thereof, and three on the part of the United Kingdom, appointed by His Majesty on the recommendation of the Governor in Council of the Dominion of Canada.

"Article VIII. This International Joint Commission shall have jurisdiction over and shall pass upon all cases involving the use or obstruction or diversion of the waters, with respect to which, under Articles III and IV of this Treaty, the approval of this Commission is

49/ Ibid., pp. 308-310.

50/ Legislative Texts ..., Treaty No. 79, p. 260.

required, and in passing upon such cases the Commission shall be governed by the following rules and principles which are adopted by the High Contracting Parties for this purpose:

"The High Contracting Parties shall have, each on its own side of the boundary, equal and similar rights in the use of the waters hereinbefore defined as boundary waters.

"...

"The majority of the Commissioners shall have power to render a decision. In case the Commission is evenly divided upon any question or matter presented to it for decision, separate reports shall be made by the Commissioners on each side to their own Government. The High Contracting Parties shall thereupon endeavour to agree upon an adjustment of the question or matter of difference, and if an agreement is reached between them, it shall be reduced to writing in the form of a protocol, and shall be communicated to the Commissioners, who shall take such further proceedings as may be necessary to carry out such agreement.

"Article IX. The High Contracting Parties further agree that any other questions or matters of difference arising between them involving the rights, obligations or interests of either in relation to the other or to the inhabitants of the other, along the common frontier between the United States and the Dominion of Canada, shall be referred from time to time to the International Joint Commission for examination and report whenever either the Government of the United States or the Government of the Dominion of Canada shall request that such questions or matters of difference be so referred.

"The International Joint Commission is authorized in each case so referred to examine into and report upon the facts and circumstances of the particular questions and matters referred, together with such conclusions and recommendations as may be appropriate, subject, however, to any restrictions or exceptions which may be imposed with respect thereto by the terms of the reference.

"Such reports of the Commission shall not be regarded as decisions of the questions or matters so submitted either on the facts or the law, and shall in no way have the character of an arbitral award.

"The Commission shall make a joint report to both Governments in all cases in which all or a majority of the Commissioners agree, and in case of disagreement the minority may make a joint report to both Governments, or separate reports to their respective Governments.

"In case the Commission is evenly divided upon any question or matter referred to it for report, separate reports shall be made by the Commissioners on each side to their own Government.

/...

"Article X. Any questions or matters of difference arising between the High Contracting Parties involving the rights, obligations or interests of the United States or of the Dominion of Canada either in relation to each other or to their respective inhabitants, may be referred for decision to the International Joint Commission by consent of the two Parties, it being understood that on the part of the United States any such action will be by and with the advice and consent of the Senate, and on the part of His Majesty's Government with the consent of the Governor-General in Council. In each case so referred the said Commission is authorized to examine into and report upon the facts and circumstances of the particular questions and matters referred, together with such conclusions and recommendations as may be appropriate, subject, however, to any restrictions or exceptions which may be imposed with respect thereto by the terms of the reference.

"A majority of the said Commission shall have power to render a decision or finding upon any of the questions or matters so referred.

"If the said Commission is equally divided or otherwise unable to render a decision or finding as to any questions or matters so referred, it shall be the duty of the Commissioners to make a joint report to both Governments, or separate reports to their respective Governments, showing the different conclusions arrived at with regard to the matters or questions so referred, which questions or matters shall thereupon be referred for decision by the High Contracting Parties to an umpire chosen in accordance with the procedure prescribed in the 4th, 5th and 6th paragraphs of Article XLV of the Hague Convention for the Pacific Settlement of International Disputes, dated the 18th October, 1907. Such umpire shall have power to render a final decision with respect to those matters and questions so referred on which the Commission failed to agree.

"Article XI. A duplicate original of all decisions rendered and joint reports made by the Commission shall be transmitted to and filed with the Secretary of State of the United States and the Governor-General of the Dominion of Canada, and to them shall be addressed all communications of the Commission.

"Article XII. The International Joint Commission shall meet and organize at Washington promptly after the members thereof are appointed, and when organized the Commission may fix such times and places for its meetings as may be necessary, subject at all times to special call or direction by the two Governments. Each Commissioner, upon the first joint meeting of the Commission after his appointment, shall, before proceeding with the work of the Commission, make and subscribe a solemn declaration in writing that he will faithfully and impartially perform the duties imposed upon him under this Treaty, and such declaration shall be entered on the records of the proceedings of the Commission.

"The United States and Canadian sections of the Commission may each appoint a secretary, and these shall act as joint secretaries of the Commission at its joint sessions, and the Commission may employ engineers and

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clerical assistants from time to time as it may deem advisable. The salaries and personal expenses of the Commission and of the secretaries shall be paid by their respective Governments, and all reasonable and necessary joint expenses of the Commission incurred by it shall be paid in equal moieties by the High Contracting Parties.

"The Commission shall have power to administer oaths to witnesses and to take evidence on oath whenever deemed necessary in any proceeding, or enquiry, or matter within its jurisdiction under this Treaty, and all parties interested therein shall be given convenient opportunity to be heard, and the High Contracting Parties agree to adopt such legislation as may be appropriate and necessary to give the Commission the powers above mentioned on each side of the boundary, and to provide for the issue of subpoenas and for compelling the attendance of witnesses in proceedings before the Commission. The Commission may adopt such rules of procedure as shall be in accordance with justice and equity, and may make such examination in person and through agents or employees as may be deemed advisable." ^{51/}

(4) Paragraph 1 attempts to strike a balance between (a) requiring that joint institutions be established, which is not an obligation of watercourse States under general international law and may not even be necessary with regard to certain international watercourses, and (b) merely recommending that watercourse States consider establishing such bodies, which would not adequately reflect the importance attached to joint institutional management by States and experts in the field. Thus paragraph 1 requires that watercourse States enter into consultations, if any of them should so request, concerning the formation of a joint organization. It does not require "negotiations", per se, in view of previous discussions in the Commission relating to articles 7 and 11-21. A particular question that the Commission may wish to consider is whether a stronger obligation, such as that envisaged in the draft article proposed by Mr. Schwebel, ^{52/} would be preferable.

(5) Paragraph 2 contains an illustrative list of functions that joint organizations might perform. As indicated in the treaty provisions quoted in paragraph (3) of these comments, the range of possible functions that might be performed by such an organization is extremely broad. An effort was made to confine the list in paragraph 2 to the most important and common of these functions. It will be noted, however, that subparagraph (a) embraces a wide variety of functions since it relates to the implementation of the substantive and procedural obligations under the draft articles. The same technique is employed in

^{51/} Ibid., pp. 262-265.

^{52/} "... [T]he system States concerned shall enter into negotiations with a view to the establishment of permanent institutional machinery ..." For the full text of the draft article, see paragraph (2) of the comments to draft article 26, above.

the Indus Waters Treaty, which provides in its article VIII that the permanent Indus Commission shall "serve as the regular channel of communication on all matters relating to the implementation of the Treaty ..." (para. (1)) and that the "purpose and functions of the Commission shall be to establish and maintain co-operative arrangements for the implementation of this Treaty, to promote co-operation between the parties in the development of the waters of the Rivers ..." (para. (4)).

(6) Paragraph 3 contains a non-exhaustive list of additional functions that may be entrusted to a joint organization. The functions enumerated in the paragraph go beyond management, per se. They are, however, functions that are often assigned to joint institutional mechanisms, as in the case of the Permanent Indus Commission (India and Pakistan) 53/ and the International Joint Commission (Canada and the United States). 54/ Applicable international agreements usually provide that the reports and recommendations to be submitted by such bodies are of a non-binding nature.

(7) Joint commissions are normally staffed largely by technical experts and, to this extent, are particularly well suited to finding facts and recommending alternative methods of accommodating any differences between watercourse States. The report of the United Nations Panel of Experts on the Legal and Institutional Aspects of International Water Resources Development, entitled Management of International Water Resources: Institutional and Legal Aspects, 55/ recommends that differences be resolved at the technical level, whenever possible,

"because professionally qualified and experienced officers who are dealing on a day-to-day basis with international water resources problems and with their professional counterparts are in the best position to marshal and evaluate the extensive and complex factual data and to weigh the scientific, engineering and management considerations involved in a water resources matter on which there is some disagreement ... [Thus,] every effort should be made to promote the resolution of differences by the provision of competent accommodation machinery at the operating level." 56/

This same theme - that procedures should be made available for the resolution of disputes at lower levels before they are referred to higher governmental authorities - has inspired the Special Rapporteur's recommendations in the chapters of the present report dealing with implementation and the settlement of disputes. It is pursued further in those chapters.

53/ See article VIII, paragraph (4), and article IX, paragraph (1), quoted above in paragraph (3) of these comments.

54/ See article VIII of the 1909 Boundary Waters Treaty and, in particular, articles IX and X of that agreement. These provisions are quoted above in paragraph (3) of these comments.

55/ See note 3, supra.

56/ Ibid., at pp. 144 and 145.

II. SECURITY OF HYDRAULIC INSTALLATIONS

A. Introduction and overview

20. Previous Special Rapporteurs have considered extensively the subtopic of security of hydraulic installations and have submitted draft articles on the subject. ^{57/} These treatments of the subtopic have identified a number of possible elements that could be included in one or more draft articles: (1) an obligation to design, construct and maintain "works or installations containing dangerous forces", ^{58/} including dams, dikes and weirs, in such a manner as to provide reasonable assurances of their safety; ^{59/} (2) an obligation to prevent poisoning; (3) an obligation not to attack, destroy or damage hydraulic installations and other facilities during peacetime or in time of armed conflict (unless in use for military purposes); (4) an obligation not to use hydraulic installations or other facilities capable of releasing dangerous forces or substances in preparation for, or in the conduct of, offensive military operations; (5) an obligation to consult, upon request, concerning security and safety measures for protection against poisoning and terrorist acts; (6) an obligation to maintain during times of armed conflict, in so far as possible, previously established systems for warning other States of water-related hazards and emergencies; and (7) an obligation not to withhold, during times of peace or armed conflict, water from a watercourse State so as to jeopardize the survival of the civilian population or to imperil the viability of the environment.

^{57/} See the discussion of "Hydraulic installations and water security" and draft article 13, "Water resources and installation safety", in S. Schwebel, third report (supra, note 2), at pp. 164-172; draft article 28, "Safety of international watercourse systems, installations and constructions", and accompanying commentary, in J. Evensen, first report (supra, note 2), at pp. 186 and 187; and draft articles 28, "Safety of international watercourses, installations and constructions, etc.", and 28 bis, "Status of international watercourses, their waters and constructions, etc., in armed conflicts", and accompanying commentary, in J. Evensen, second report (supra, note 2) at pp. 121 and 122.

^{58/} The quoted language is from paragraph 1 of article 56 of the Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of International Armed Conflicts (Protocol I), United Nations, Juridical Yearbook 1977 (United Nations publication, Sales No. 3.79.V.1), p. 115.

^{59/} Paragraph 1 of both versions of Mr. Evensen's article 28 would require watercourse States to "employ their best efforts to maintain and protect" both the international watercourse and installations, etc., pertaining thereto. The danger that could be posed by such installations, in particular to downstream States, is implicitly recognized in Mr. Schwebel's third report (supra, note 2), para. 391, at p. 164.

21. While both Messrs. Schwebel and Evensen have regarded the subtopic as a whole as being extremely important, Mr. Evensen expressed doubts about the advisability of dealing with the aspect of the subtopic regarding protection of water resources and installations in time of armed conflict:

"The two Protocols of the 1949 Geneva Conventions were agreed on after long and delicate negotiations. The Special Rapporteur fears that the inclusion of such provisions here might be considered as constituting an amendment or an addition to the two Protocols and thus renew the discussions on the principles and rules pertaining to international and internal armed conflicts." 60/

These considerations led Mr. Evensen to exclude any reference to armed conflict from the version of the article proposed in his first report. 61/ However, the discussions of this article in the Commission and the Sixth Committee in 1983 convinced him that the subject should be addressed, at least in a general way, in a draft article. He accordingly proposed a new draft article in his second report that deals, in a single paragraph, with the status of international watercourses and related installations in armed conflicts. 62/ Mr. Schwebel, for his part, addresses armed conflict in four of the six paragraphs of the article proposed in his third report. 63/

22. The present Special Rapporteur, while fully recognizing the signal importance of the protection of water resources and installations in time of armed conflict, cannot help but be influenced by the considerations identified by Mr. Evensen, and by similar concerns expressed both in the Commission and in the Sixth Committee. After careful consideration of the matter, he has reached the conclusion that an approach to the subtopic more along the lines of the two articles proposed in Mr. Evensen's second report would be least likely to give rise to serious objections. The Special Rapporteur will therefore submit draft articles following this basic approach after briefly reviewing the most important precedents in the field.

60/ J. Evensen, first report (supra, note 2), at p. 187, para. 186. See also ibid., para. 46, at p. 163, wherein Mr. Evensen states as follows:

"In view of the great difficulties with which the Geneva Diplomatic Conference of 1977 was faced, it seems somewhat doubtful whether questions pertaining to the laws of armed conflicts should be introduced in the present draft convention. Such an effort ... may create unforeseen difficulties in the Commission's work."

61/ See Mr. Evensen's first report (supra, note 2), at p. 186.

62/ The draft article, numbered 28 bis, is referred to in note 57, supra.

63/ See S. Schwebel, third report (supra, note 2), at p. 169.

B. State practice and views of commentators

23. The nature of the problem of water resources and installation safety was well described by Mr. Schwebel:

"Questions of public safety with respect to the possible failure, mismanagement or sabotage of major hydraulic works and of the security of the installations themselves are not novel. The collapse of a high storage dam, for example, may take thousands of lives as well as have devastating economic and financial consequences. As more elaborate and much more costly multi-purpose projects have been constructed, especially in recent decades, concern has heightened. In addition to the potential for catastrophe posed by intensified occupation and use of low-lying areas downstream, the vulnerability of such works to acts of terrorism has led, or should have led, waterworks administrators to enhance their security precautions and to review their emergency operating procedures.

"...

"System States have a legitimate interest in the safety and security of water-related installations, and not simply because of their potential for death and destruction. More and more major projects are part of a regional or system-wide plan for development, control and environmental protection, with benefits and costs, direct and indirect, to each participating system State. In their consultations and their sharing of information and data, system States will increasingly include questions of installation security and water safety, as well as the more familiar concern for safe construction and operation." ^{64/}

24. Of course, these concerns are not confined to peacetime. But the fact that armed conflict can pose particularly grave dangers to the safety of drinking water and the security of hydraulic installations should not obscure the importance of proper construction, maintenance and management in time of peace. Recognition of the disastrous consequences of, e.g., the burst of hydraulic works such as dams has led a number of Governments, notably Switzerland, Sweden and Germany ^{65/} to enact municipal legislation providing for special protection.

25. State treaty practice evinces similar concerns. For example, in 1963 France and Switzerland concluded the Convention on the Emosson hydroelectric project, pursuant to which they would share the power produced by the project from waters originating in both countries. The designs and general plans for the works involved are to be prepared by a concessionaire but they may not be carried out

^{64/} S. Schwebel, third report (supra, note 2), at p. 164, paras. 390 and 392.

^{65/} See "Intermediate Report on the Protection of Water Resources and Water Installations in Times of Armed Conflict", F. J. Berber, Rapporteur, in ILA, Report of the Fifty-sixth Conference, New Delhi, 1974 (London, 1976), p. 136.

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without the prior approval of the parties. 66/ The Convention also defines the obligations of the concessionaire relating to drainage and spillways and obliges him to allow the flows deemed necessary to safeguard general interests, such as those relating to sanitation, irrigation, fish conservation, environmental protection, etc., to run downstream from the dam and the water intakes. 67/ A permanent supervisory commission is established to enforce the provisions of the Convention. 68/ The security of the works is also specifically made subject to the legislation of the State in whose territory they are constructed. 69/

26. Another example of an agreement addressing the issue of water installation safety is the Convention of 1957 between Switzerland and Italy concerning the use of the water power of the Spöl. 70/ Article 8 of that agreement deals with conditions for the construction of the dam, and protection against flooding. It provides that the dam is to be constructed in such a way as to assure maximum safety for Switzerland and is to be in accordance with the laws in force in that country. The article further provides that the dam is to be designed in such a way as to afford adequate free outlets for water, so that flood waters may flow away at all times. 71/

27. With regard to armed conflict, publicists from Gentili, Grotius and Vattel to Fauchille and Oppenheim have condemned the poisoning of water supplies as a means of waging war. 72/ The subject was also addressed in the Regulations annexed to the 1907 Hague Conventions on the laws and customs of war. In particular, article 23 (e) of the Regulations annexed to Convention IV concerns the use of weapons or material "calculated to cause unnecessary suffering". In his analysis

66/ Convention, article 2, in Revue générale de droit international public (Paris), 3rd series, vol. XXXVI, No. 1 (January-March, 1965), p. 571; summarized in Yearbook ... 1974, vol. II (Part Two), p. 311, para. 229.

67/ Ibid., article 3.

68/ Ibid., article 4.

69/ Ibid., article 2.

70/ Legislative Texts ..., Treaty No. 235, at p. 862; summarized in Yearbook ... 1974, vol. II (Part Two), p. 161, document A/5409, paras. 849-854.

71/ As summarized in Yearbook ... 1974, vol. II (Part Two), p. 162, document A/5409, para. 851.

72/ The views of these writers are noted in S. Schwebel, third report (supra, note 2), paras. 400 and 401, at p. 166.

But see, to the contrary, the conclusion of Michel d'Amboise, published in 1543, that it was legally permissible to "gaster, infester, intoxiquer et empoisonner les eaues des ennemys" (Le quidon des gens de guerre (1543)).

of article 23, Oppenheim concluded that "wells, pumps, rivers and the like from which the enemy draws drinking water must not be poisoned". ^{73/} Also addressing this question, the 1956 field manual on the law of land warfare of the army of the United States of America includes in a list of acts "representative of violations of the law of war ('war crimes')", the "poisoning of wells or streams". ^{74/}

28. The portion of the British Manual of Military Law of 1958 dealing with The Law of War on Land similarly provides:

"Water in wells, pumps, pipes, reservoirs, lakes, rivers and the like, from which the enemy may draw drinking water, must not be poisoned or contaminated. The poisoning or contamination of water is not made lawful by posting up a notice informing the enemy that the water has been thus polluted." ^{75/}

29. While the question of poisoning water supplies has thus been addressed by a variety of authorities and instruments down through the centuries, it is only recently that attempts have been made systematically to study and codify rules on the broader subject of water resources and installation safety. In an "Intermediate report" submitted at the International Law Association's 1974 Conference in New Delhi, the ILA's Committee on International Water Resources Law recognized this development:

"It is only in the last decade that the new awareness of the world-wide threat to the human environment has meant a turning point also in the considerations concerning the protection of water and water installations in times of armed conflict, although these considerations are still far from being materially comprehensive or methodically systematic." ^{76/}

^{73/} L. Oppenheim, International Law: A Treatise, 7th ed., H. Lauterpacht, ed. (London, Longman, 1952), vol. 2: "Disputes, War and Neutrality", p. 340, sect. 110. Oppenheim added that "an armed force besieging a town may ... cut off the river which supplies drinking water to the besieged, but must not poison the river" (*ibid.*, p. 419, sect. 157).

^{74/} United States Department of the Army Field Manual (FM 27-10) on the Law of Land Warfare (1956), para. 504 (i), as quoted in M. Whiteman, Digest of International Law (Washington, D.C., United States Government Printing Office), vol. 10, p. 455. See also para. 37 (b), of the manual, quoted in Whiteman, *idem*.

^{75/} United Kingdom, War Office, The Law of War on Land, Being part III of the Manual of Military Law (1958), p. 42, quoted in Whiteman, *op. cit.*, p. 458.

^{76/} ILA, Report of the Fifty-sixth Conference (*supra*, note 65), at p. 136.

30. Subsequently, at its 1976 Madrid Conference, ILA adopted the following resolution and set of draft articles on the protection of water resources and water installations in times of armed conflict.

"RESOLUTION

"Recalling the significant increase, during recent decades, in the demand for water and the consequent development of water installations;

"Being aware of the destructive power of modern weapons;

"Taking into account the vital importance of water and water installations for the health and even the survival of people all over the world and the susceptibility of water and water installations to damage and destruction;

"Considering the lack of specific rules of international law for the protection of water and water installations against damage or destruction in times of armed conflict;

"Convinced of the urgent need to establish precise rules for the protection of water and water installations against damage or destruction and thus to contribute to the development of international humanitarian law applicable to armed conflicts;

"Adopts the following articles as guidelines for the elaboration of such rules:

"Article I

"Water which is indispensable for the health and survival of the civilian population should not be poisoned or rendered otherwise unfit for human consumption.

"Article II

"Water supply installations which are indispensable for the minimum conditions of survival of the civilian population should not be cut off or destroyed.

"Article III

"The diversion of waters for military purposes should be prohibited when it would cause disproportionate suffering to the civilian population or substantial damage to the ecological balance of the area concerned. A diversion that is carried out in order to damage or destroy the minimum conditions of survival of the civilian population or the basic ecological

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balance of the area concerned or in order to terrorize the population should be prohibited in any case.

"Article IV

"The destruction of water installations such as dams and dikes, which contain dangerous forces, should be prohibited when such destruction might involve grave dangers to the civilian population or substantial damage to the basic ecological balance.

"Article V

"The causing of floods as well as any other interference with the hydrologic balance by means not mentioned in articles II to IV should be prohibited when it involves grave dangers to the civilian population or substantial damage to the ecological balance of the area concerned.

"Article VI

"1. The prohibitions contained in articles I to V above should be applied also in occupied enemy territories.

"2. The occupying Power should administer enemy property according to the indispensable requirements of a hydrologic balance.

"3. In occupied territories, seizure, destruction or intentional damage to water installations should be prohibited when their integral maintenance and effectiveness would be vital to the health and survival of the civilian population.

"Article VII

"The effect of the outbreak of war on the validity of treaties or of parts thereof concerning the use of water resources should not be termination but only suspension. Such suspension should take place only when the purpose of the war or military necessity imperatively demand the suspension and when the minimum requirements of subsistence for the civil population are safeguarded.

"Article VIII

"1. It should be prohibited to deprive, by the provisions of a peace treaty or similar instrument, a people of its water resources to such an extent that a threat to the health or to the economic or physical conditions of survival is created.

"2. When, as a result of the fixing of a new frontier, the hydraulic system in the territory of one State is dependent on works established in the territory of another State, arrangements should be made for the safeguarding of uninterrupted delivery of water supplies indispensable for the vital needs of the people". 77/

ILA adopted these draft articles "with the understanding that these rules should be applied also with respect to other conduct intended to damage or destroy the water resources of a State or area ...". 78/

31. One year after the ILA conference at which the foregoing draft articles were adopted, the Geneva Diplomatic Conference on the Reaffirmation and Development of International Humanitarian Law Applicable in Armed Conflict, following three years of meetings, adopted by consensus two protocols, certain provisions of which are pertinent to the present inquiry. These provisions are articles 54 and 56 of Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of International Armed Conflicts (Protocol I); and articles 14 and 15 of Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of Non-International Armed Conflicts (Protocol II). Article 54 of Protocol I, which deals with the "Protection of objects indispensable to the survival of the civilian population", provides in its paragraph 2 as follows:

"It is prohibited to attack, destroy, remove or render useless objects indispensable to the survival of the civilian population, such as foodstuffs, agricultural areas for the production of foodstuffs, crops, livestock, drinking water installations and supplies and irrigation works, for the specific purpose of denying them for their sustenance value to the civilian population or to the adverse party, whatever the motive, whether in order to starve out civilians, to cause them to move away or for any other motive." 79/

77/ ILA, Report of the Fifty-seventh Conference (*supra*, note 15), pp. xxxv-xxxvi.

78/ *Ibid.*, p. xxxiv. Mr. Schwebel agreed that, while helpful, ILA's articles should not be taken as an indication that the Commission's articles should be limited to situations of armed conflict (S. Schwebel, third report (*supra*, note 2), at p. 168, para. 407).

79/ Protocols Additional to the Geneva Conventions of 12 August 1949 (International Committee of the Red Cross (ICRC), Geneva 1977), p. 38 (emphasis added); also reproduced in United Nations, Treaty Series, vol. 1125, p. 4. The ICRC commentary to this provision explains that "the verbs 'attack', 'destroy', 'remove' and 'render useless' are used in order to cover all possibilities, including pollution, by chemical or other agents, of water reservoirs ..." (C. Pilloud *et al.*, Commentary on the Additional Protocols of 8 June 1977 to the Geneva Conventions of 12 August 1949, Sandoz, Swinarski and Zimmermann, eds. (Geneva 1987), p. 655).

Paragraph 4 of the same article provides further that "[t]hese objects shall not be made the objects of reprisals". 80/

32. Article 56 of Protocol I is entitled "Protection of works and installations containing dangerous forces", and provides in part as follows:

"1. Works or installations containing dangerous forces, namely dams, dikes and nuclear electrical generating stations, shall not be made the object of attack, even where these objects are military objectives, if such attack may cause the release of dangerous forces and consequent severe losses among the civilian population. Other military objectives located at or in the vicinity of these works or installations shall not be made the object of attack if such attack may cause the release of dangerous forces from the works or installations and consequent severe losses among the civilian population.

"2. The special protection against attack provided by paragraph 1 shall cease:

(a) For a dam or a dike only if it is used for other than its normal function and in regular, significant and direct support of military operations and if such attack is the only feasible way to terminate such support;

(b) For a nuclear electrical generating station only if it provides electric power in regular, significant and direct support of military operations and if such attack is the only feasible way to terminate such support;

...

"4. It is prohibited to make any of the works, installations or military objectives mentioned in paragraph 1 the object of reprisals.

"5. The Parties to the conflict shall endeavour to avoid locating any military objectives in the vicinity of the works or installations mentioned in paragraph 1. Nevertheless, installations erected for the sole purpose of defending the protected works or installations from attack are permissible and shall not themselves be made the object of attack, provided that they are not used in hostilities except for defensive actions necessary to respond to attacks against the protected works or installations and that their armament is limited to weapons capable only of repelling hostile action against the protect works or installations.

"6. The High Contracting Parties and the Parties to the conflict are urged to conclude further agreements among themselves to provide additional protection for objects containing dangerous forces.

"7. In order to facilitate the identification of the objects protected by this article, the Parties to the conflict may mark them with a special sign consisting of a group of three bright orange circles placed on the same axis,

80/ Ibid.

as specified in article 16 of annex I to this Protocol. The absence of such marking in no way relieves any Party to the conflict of its obligations under this article." 81/

33. Article 14 of Protocol II, dealing with the "Protection of objects indispensable to the survival of the civilian population", provides as follows:

"Starvation of civilians as a method of combat is prohibited. It is therefore prohibited to attack, destroy, remove or render useless, for that purpose, objects indispensable to the survival of the civilian population, such as foodstuffs, agricultural areas for the production of foodstuffs, crops, livestock, drinking water installations and supplies and irrigation works." 82/

34. Article 15, on the "Protection of works and installations containing dangerous forces", provides:

"Works or installations containing dangerous forces, namely dams, dikes and nuclear electrical generating stations, shall not be made objects of attack, even where these objects are military objects, if such attack may cause the release of dangerous forces and consequent severe losses among the civilian population." 83/

81/ Ibid., pp. 39 and 40. The ICRC commentary recalls the widespread devastation that can be wreaked by the destruction of dikes, dams and other works:

"In 1938 the Chinese authorities breached the dykes of the Yellow River near Chang-Chow to stop the Japanese troops, resulting in extensive losses and widespread damage. In 1944 ... in the Netherlands, German troops flooded many thousands of hectares of agricultural land with sea water to prevent the advance of the enemy.

"It was also during the Second World War that deliberate attacks were mounted against hydro-electric dams. The best known are those which destroyed the dams in the Eder and the Moehne in Germany in May 1943. These operations resulted in considerable damage: 125 factories were destroyed or seriously damaged and in addition 3,000 hectares of cultivated land were lost for the harvest of that year, 1,300 persons were killed, including some deported persons and allied prisoners, and finally 6,500 head of livestock were lost." (ICRC commentary (supra, note 79), at p. 667 (footnote omitted))

82/ Ibid., p. 97. The background and an explanation of this provision may be found in the ICRC commentary (supra, note 79), at pp. 1455 et seq.

83/ Ibid., pp. 97 and 98. The ICRC commentary (supra, note 79), at p. 1462, notes that:

"[t]he list is exhaustive, which does not mean that there are not other kinds of works or installations whose destruction is likely to entail heavy losses among the civilian population. Thus, for example, the

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35. As noted above, Mr. Evensen expressed reservations about the advisability of addressing, in the Commission's draft articles, the subjects dealt with in the 1977 Geneva Protocols. He feared that inclusion of such provisions in the draft articles "might be considered as constituting an amendment or an addition to the two Protocols and thus renew the discussions on the principles and rules pertaining to international and internal armed conflicts." ^{84/}

C. The proposed articles

36. For the reasons set forth in the introductory portion of the present chapter, the following draft articles do not deal in detail with the protection of water resources and hydraulic installations in times of armed conflict. Draft article 27 focuses upon the safety of water resources and installations, while draft article 28 deals generally with their status in times of armed conflict.

[PART IX. PROTECTION OF WATER RESOURCES AND INSTALLATIONS]

Article [27]

Protection of water resources and installations

1. Watercourse States shall employ their best efforts to maintain and protect international watercourses and related installations, facilities and other works.

2. Watercourse States shall enter into consultations, with a view to concluding agreements or arrangements concerning:

(a) General conditions and specifications for the establishment, operation and maintenance of installations, facilities and other works;

(b) The establishment of adequate safety standards and security measures for the protection of international watercourses and related installations, facilities and other works from hazards and dangers due to the forces of nature, or to wilful or negligent acts.

3. Watercourse States shall exchange data and information concerning the protection of water resources and installations and, in particular, concerning the conditions, specifications, standards and measures mentioned in paragraph 2 of this draft article.

(continued)

problem of storage facilities for crude oil and oil products and the risks of oil rigs were raised during the Diplomatic Conference. In the end it was only possible to arrive at a consensus on the items listed above, though this does not exclude the protection of other types of installations under different international legal régimes."

^{84/} See J. Evensen, first report (*supra*, note 2), p. 187, para. 186.

Comments

(1) The title of part IX and article [27] appear in square brackets for the same reasons given in connection with part VIII and draft article [26].

(2) Paragraph 1 of draft article [27] requires watercourse States to use their "best efforts" to keep international watercourses, as well as any installations or works, in safe condition and to protect them from sabotage, as by poisoning or destruction.

(3) In contrast to paragraph 1 of draft article [26], paragraph 2 would require watercourse States to enter into consultations whether or not any watercourse State so requests. This is consistent with the comparable draft article proposed by Mr. Evensen and, in the judgement of the present Special Rapporteur, is mandated by the disastrous consequences that could ensue from the failure of a major installation or from the contamination of water supplies. The consultations would be aimed at reaching agreement upon such matters as conditions and specifications for the construction and maintenance of dams, as provided for, e.g., in article 8 of the Convention of 1957 between Switzerland and Italy concerning the use of the water power of the Spöl, referred to above. ^{85/} Subparagraph (b) of paragraph 2 indicates that watercourse States are further to consult with regard to the establishment of adequate safety standards and security measures in relation to "hazards and dangers due to the forces of nature, or to wilful or negligent acts". The corresponding subparagraph of the draft article submitted by Judge Evensen also referred to "hazards and dangers created by faulty construction, insufficient maintenance or other causes". These matters were not included in the present subparagraph because it is believed that they are covered by the terms of subparagraph (a).

(4) Finally, paragraph 3 requires watercourse States to exchange data and information relating to the protection of water resources and installations. It makes particular mention of the "conditions" and "specifications" referred to in subparagraph (a) of paragraph 2, and of the safety "standards" and security "measures" referred to in subparagraph (b) of that paragraph. Watercourse States have a legitimate interest in such information because of their larger interests in protecting their populations from disasters, as well as from harm due to interference with any of the increasingly common bilateral or multilateral arrangements for development of the watercourse, sharing of power, conservation and management of living resources, or the like.

^{85/} See text accompanying notes 70 and 71, *supra*. The Convention is reproduced in Legislative Texts ..., Treaty No. 235, at p. 862; and is summarized in Yearbook ... 1974, vol. II (Part Two), p. 161, document A/5409, paras. 849-854.

Article [28]

Status of international watercourses and water installations
in time of armed conflict

International watercourses and related installations, facilities and other works shall be used exclusively for peaceful purposes consonant with the principles enshrined in the Charter of the United Nations and shall be inviolable in time of international as well as internal armed conflicts.

Comments

(1) This draft article closely parallels draft article 28 bis, submitted in Mr. Evensen's second report. 86/ It has been somewhat simplified, but the basic substantive elements are retained.

(2) While the first limb of the draft article, viz., that international watercourses and works are to be used exclusively for peaceful purposes, is consistent with article 56 of Protocol I Additional to the 1949 Geneva Conventions, it is not clearly required by that article. 87/ It is likewise uncertain whether the second limb of draft article [28], viz., that such watercourses and works are inviolable in international as well as in internal armed conflicts, is literally required by international law. Indeed, while poisoning of water supplies is universally condemned, cutting off an enemy's source of water has been found permissible by Fauchille 88/ and Oppenheim, 89/ as well as in the 1956 United States army field manual in commenting upon the Regulations annexed to the Hague

86/ See J. Evensen, second report (supra, note 2), at p. 122.

87/ Paragraph 5 of article 56, set forth above, provides only that the "parties to the conflict shall endeavour to avoid locating any military objectives in the vicinity of ... works or installations ..." that are protected under paragraph 1 of the article.

88/ Fauchille maintained that it was "permissible to perforate dikes to demolish sluice gates", and that "[o]ne may also divert the course of a river, cut off the enemy's sources of water" (P. Fauchille, Traite de droit international public, 8th ed., revision of Manual de droit international public (Paris, H. Bonfils, Rousseau, 1921), vol. II, p. 123)).

89/ Oppenheim concluded that "an armed force besieging a town may ... cut off the river which supplies drinking water to the besieged, but must not poison the river." L. Oppenheim, International Law: A Treatise. 7th ed.; H. Lauterpacht, ed. (London, Longman, 1952), vol. 2: Disputes, War and Neutrality, p. 419, sect. 157.

Convention IV of 1907. ^{90/} Yet the importance and scarcity of fresh water in today's world is such that the rule proposed by Mr. Evensen has compelling force. To this may be added the humanitarian principles underlying the 1977 Geneva Protocols - in particular, the one covering protection of resources indispensable to the survival of the civilian population ^{91/} - and the notion of inviolability of international watercourses and installations seems fundamental indeed. The principle is therefore submitted once again for the Commission's consideration.

^{90/} Supra, note 74. The manual states that article 23 (a) of the Regulations "does not prohibit measures being taken to dry up springs, to divert rivers and aqueducts from their courses ..." (ibid., para. 37 (b), as quoted in Whiteman op. cit., p. 455).

^{91/} Chapter III (Civilian objects) of part IV (Civilian population) of Protocol I deals with "Protection of objects indispensable to the survival of the civilian population" in article 54, quoted above. There is no provision concerning "resources" indispensable to the survival of the civilian population, but "objects" expressly covers water "installations and supplies and irrigation works".

III. IMPLEMENTATION OF THE DRAFT ARTICLES

A. Introduction

37. Although they were not initially reflected in the outline of remaining issues presented to the Commission in the fourth report, ^{92/} it is the belief of the Special Rapporteur that provisions dealing with implementation of the draft articles are of great importance to their smooth functioning. While the following annex is entitled "Implementation of the draft articles", it does not purport - nor should a framework agreement attempt - to deal with every aspect of the subject. It instead lays down several overarching principles that should facilitate implementation of the draft articles, make redress more readily available to private parties and help to avoid disputes between watercourse States.

38. The first of these principles is that of non-discrimination. Draft article 2 of annex I implements the principle by requiring that watercourse States give extraterritorial effects the same weight as domestic ones in considering the permissibility of activities affecting an international watercourse system. Draft article 3 of the annex requires that recourse be available under the domestic legal system of watercourse States to those injured in other States. Draft article 4 provides for equal rights of access by persons in other States to the relevant administrative and judicial procedures in a watercourse State that is the source of actual or potential harm. To make the latter provision meaningful, draft article 5 requires that watercourse States take appropriate measures to provide potentially affected persons in other States with sufficient information to allow them to exercise their rights under draft article 4. And finally, draft article 6 deals with jurisdictional immunity, providing that a watercourse State that has caused harm to persons in other States should enjoy no greater jurisdictional immunity with regard to those persons than it does with regard to its own citizens.

39. A previous Special Rapporteur emphasized the "utility of several 'echelons'" of procedures for the avoidance and resolution of differences. ^{93/} He also noted that, "In some international watercourse systems, a rule of equal access to information and to administrative and judicial process by nationals of co-system States - a matter of equal treatment - has already attained considerable importance." ^{94/} It is a major premise of the proposed annex that actual and potential watercourse problems should be resolved on the private level, through courts and administrative bodies, in so far as possible. ^{95/} Beyond being

^{92/} A/CN.4/412, para. 7.

^{93/} S. Schwebel, third report (*supra*, note 2), at p. 182.

^{94/} *Ibid.*, at p. 190.

^{95/} In the context of transfrontier pollution injuries, this thesis is developed in McCaffrey, "Trans-boundary Pollution Injuries: Jurisdictional Considerations in Private Litigation between Canada and the United States",

supported by policies underlying the doctrine of exhaustion of local remedies, 96/ resolution at this level will usually bring relief to those actually suffering injury more rapidly than diplomatic procedures 97/ and will prevent problems from

(continued)

California Western International Law Journal, vol. 3 (1973), p. 191, especially text accompanying notes 5-13 (hereinafter referred to as "Trans-boundary Pollution Injuries"); idem, Private Remedies for Transfrontier Environmental Disturbances, especially pp. 11 and 12, IUCN Environmental Policy and Law Paper No. 8, International Union for the Conservation of Nature and Natural Resources (Morges, Switzerland, 1975). See also A. Rest, Convention on Compensation for Transfrontier Environmental Injuries, Beiträge zur Umweltgestaltung, No. A 53 (1976) (in English, French and German); and idem, Luftverschmutzung und Haftung in Europa (1986).

96/ "This is a rule which is justified by practical and political considerations and not by any logical necessity deriving from international law as a whole. The more persuasive practical considerations advanced are the greater suitability and convenience of national courts as forums for the claims of individuals and corporations, the need to avoid the multiplication of small claims on the level of diplomatic protection, the manner in which aliens by residence and business activity have associated themselves with the local jurisdiction, and the utility of a procedure which may lead to classification of the facts and liquidation of the damages." (I. Brownlie, Principles of Public International Law (3d ed., (1979), p. 496 (footnotes omitted))

While this doctrine has been applied for the most part in cases involving claims against a State in which an injury was suffered, it would also seem applicable in cases where an act in one State causes an injury to the claimant in another.

"The policy underlying the customary requirement that injured parties exhaust all local remedies before seeking governmental assistance is particularly well suited to this situation since the offensive activity will often be located in the same ecological region as, and in proximity to, the injured party." (McCaffrey, Trans-boundary Pollution Injuries (supra, note 95) at p. 191 (footnotes omitted))

97/ For example, the facts giving rise to the recent case between the United States and Italy occurred in 1968; the claim was initially submitted by the United States to the Government of Italy in 1974, and the decision of the Chamber of the International Court of Justice was rendered in 1989. Case Concerning Elettronica Sicula S.p.A (ELSI) (United States of America v. Italy), Judgment of 20 July 1989, I.C.J. Reports, 1989, p. 15; the requisitioning of ELSI's plant by the Mayor of Palermo and subsequent events are described at pp. 32 et seq., paras. 30 et seq.

/...

escalating and from becoming unnecessarily politicized. Moreover, a State may be loath to espouse the claim of an individual for fear of jeopardizing relations with the State which the individual alleges to have caused his injury. The availability of access by natural and legal persons to the judicial and administrative procedures of other watercourse States should help to avoid many disputes between the States themselves by resolving problems at the level of those most directly affected. If these procedures are not applicable or if the problem cannot be resolved at that level, however, the procedures in annex II, "Settlement of disputes", would be available to the States involved.

B. The proposed annex

ANNEX I

IMPLEMENTATION OF THE DRAFT ARTICLES

Article 1

Definition

For the purposes of this annex, "watercourse State of origin" means a watercourse State within which activities are carried on or planned that affect or may affect an international watercourse [system] and that give rise or may give rise to appreciable harm in another watercourse State.

Comments

(1) The definition of "watercourse State of origin" is based upon the definition of "country of origin" in the Organisation for Economic Co-operation and Development (OECD) Council Recommendation on Implementation of a régime of equal right of access and non-discrimination in relation to transfrontier pollution of 17 May 1977, 98/ which provides as follows:

"(e) 'Country of origin' means any Country within which, and subject to the jurisdiction of which, transfrontier pollution originates or could originate in connection with activities carried on or contemplated in that Country." 99/

98/ OECD document C(77)28 (Final), annex (hereinafter referred to as "OECD Implementation recommendation"), in OECD, OECD and the Environment (1986), at pp. 150 et seq. (hereinafter referred to as "OECD and the Environment"). See generally Van Hoogstraten, Dupuy and Smets, "Equal Right of Access: Transfrontier Pollution", 2 Environmental Policy and Law 77 (1976).

99/ OECD Implementation recommendation (supra, note 98), Introduction, para. (e), in OECD and the Environment (supra, note 98), at p. 151. The recommendation defines "transfrontier pollution" as "any intentional or

(2) The term "activities" is used in its broad sense, referring to any use of land or water, including "measures" within the meaning of part III, "Planned measures", of the draft articles. The term "activities" was employed, rather than "measures", because the latter was not considered broad enough to cover the full panoply of uses that should be covered. The term "activities" has also been used in the draft articles proposed by the Special Rapporteur for the topic "International liability for injurious consequences arising out of acts not prohibited by international law." 100/

Article 2

Non-discrimination

In considering the permissibility of proposed, planned or existing activities, the adverse effects that such activities entail or may entail in another State shall be equated with adverse effects in the watercourse State where the activities are or may be situated.

Comments

(1) This draft article is based upon article 2 of the Convention on the Protection of the Environment between Denmark, Finland, Norway and Sweden of 19 February 1974, which provides as follows:

"In considering the permissibility of environmentally harmful activities, the nuisance which such activities entail or may entail in another contracting State shall be equated with a nuisance in the State where the activities are carried out." 101/

(continued)

unintentional pollution whose physical origin is subject to, and situated wholly or in part within the area under, the national jurisdiction of one country and which has effects in the area under the national jurisdiction of another country."
(*ibid.*, para. (c))

100/ The term "activity" is used throughout the draft articles proposed in the Special Rapporteur's fifth report (A/CN.4/423 and Corr.1 and 2), although it is not defined. For example, draft article 1 provides in part: "The present articles shall apply with respect to activities carried out in the territory of a State ..." (Official Records of the General Assembly, Forty-fourth Session, Supplement No. 10 (A/44/10, para. 311)).

101/ Convention done at Stockholm on 19 February 1974 and entered into force 5 October 1976, United Nations, Treaty Series, vol. 1092, p. 279; reproduced in International Legal Materials, vol. 13, p. 591 (1974) (hereinafter referred to as "Nordic Convention"). On the Nordic Convention, see generally the chapters by Broms and Phillips in Flinterman et al., eds., Transboundary Air Pollution (1986), at pp. 141 and 153, respectively; and Kiss, "La Convention nordique sur l'Environnement", Annuaire Français de Droit International, vol. XX, p. 108 (1974).

/...

(2) The purpose of the article is twofold: to implement the general principle of non-discrimination; and to provide a legal basis for administrative consideration of extraterritorial effects of planned activities. Draft article 2 implements the principle of non-discrimination ^{102/} by requiring that, in regulating existing or prospective activities, authorities of a watercourse State treat any adverse effects, which those activities may have in other States in the same way that domestic effects would be treated. For example, if the legislation of State A requires that the competent authority consider the harmful effects of a proposed activity in determining whether to grant it an operating licence, draft article 2 would require that any harmful effects that the activity would cause in State B be given the same weight in the decision-making process as harmful effects in State A itself. In mandating consideration of extraterritorial impacts from the beginning of the licensing process, this requirement would also help to reduce the possibility of disagreements between watercourse States arising out of the application of the provisions of part III of the draft articles, which deal with planned measures.

(3) The second purpose of draft article 2 is to provide a legal basis for the consideration by administrative authorities of comments of persons residing or carrying on activities in other States. Such comments are provided for in draft article 4, below. In many legal systems, administrative authorities are empowered to consider only such effects as may occur within the State whose legislation established them. However, a right of aliens to participate in administrative proceedings would be meaningless if the body in question lacked authority to consider extraterritorial effects. Draft article 2 would therefore require that watercourse States empower their otherwise competent administrative authorities to take into consideration, when evaluating the permissibility of proposed activities, effects that are, or may be, produced in other States.

(4) The reference to adverse effects "in another State" indicates that it is not only such effects in other watercourse States that are to be taken into consideration, but those in any State other than that in which an activity is or may be situated. This provision would apply, for example, to a case in which pollution discharged into an international watercourse ultimately affected persons or property in, or the environment of, a coastal State that was not a watercourse State.

^{102/} See, e.g., OECD, Non-Discrimination in Matters of Transfrontier Pollution (1978).

See also the 1978 UNEP Principles of Conduct in the field of the Environment ..., (supra, note 25), principle 13:

"It is necessary for States, when considering, under their domestic environmental policy, the permissibility of domestic activities, to take into account the potential adverse environmental effects arising out of the utilization of shared natural resources, without discrimination as to whether the effects would occur within their jurisdiction or outside it."

/...

(5) As in the case of article 12, provisionally adopted in 1988, the expression "adverse effects" is intended to refer to effects that do not necessarily rise to the level of "appreciable harm" within the meaning of article 8, also adopted provisionally in 1988. However, the expression "adverse effects" is used in an even more generic sense than that of "appreciable adverse effect" under draft article 12, since all kinds of negative consequences that the administrative body may consider under its enabling legislation - which may go beyond "appreciable" ones - must be covered by draft article 2.

Article 3

Recourse under domestic law

1. Watercourse States shall ensure that recourse is available in accordance with their legal systems for prompt and adequate compensation or other relief in respect of appreciable harm caused or threatened in other States by activities carried on or planned by natural or juridical persons under their jurisdiction.

2. With the objective of assuring prompt and adequate compensation or other relief in respect of the appreciable harm referred to in paragraph 1, watercourse States shall co-operate in the implementation of existing international law and the further development of international law relating to responsibility and liability for the assessment of and compensation for damage and the settlement of related disputes, as well as, where appropriate, development of criteria and procedures for payment of adequate compensation, such as compulsory insurance or compensation funds.

Comments

(1) Paragraph 1 is based upon article 235, paragraph 2, of the United Nations Convention on the Law of the Sea, which provides as follows:

"2. States shall ensure that recourse is available in accordance with their legal systems for prompt and adequate compensation or other relief in respect of damage caused by pollution of the marine environment by natural or juridical persons under their jurisdiction."

(2) The requirement of paragraph 1 that compensation "or other relief" be available for harm caused "or threatened" in other States is intended to apply in particular to cases in which the implementation of measures in a watercourse State poses a significant likelihood of causing appreciable harm in another State. In such instances, persons threatened with harm in the second State should be entitled, to the same extent as persons in the first State, to seek injunctive or

similar relief ^{103/} through the competent judicial or administrative authorities of the first State in order to prevent the harm. It is in this sense that the phrase "or other relief" is used in paragraph 1. The paragraph requires that such recourse be made available to those potentially affected in other States.

(3) As in the case of article 2 of the present annex, the reference to appreciable harm "in other States" indicates that it is not only such harm in other watercourse States for which recourse must be made available. ^{104/} Thus, if a person acting in State A, a watercourse State, discharged substances into the watercourse that ultimately caused appreciable pollution harm to the operator of an activity in the territorial sea of State B, article 3 would require that recourse be available in the first State to the operator.

(4) Paragraph 2 is based upon article 235, paragraph 3, of the United Nations Convention on the Law of the Sea, which provides as follows:

"3. With the objective of assuring prompt and adequate compensation in respect of all damage caused by pollution of the marine environment, States shall co-operate in the implementation of existing international law and the further development of international law relating to responsibility and liability for the assessment of and compensation for damage and the settlement of related disputes, as well as, where appropriate, development of criteria and procedures for payment of adequate compensation, such as compulsory insurance or compensation funds."

(5) The purpose of paragraph 2 is to highlight the importance of the implementation and further development by States of the substantive and procedural law relating to remedies for transfrontier harm occasioned or threatened by water-related activities. Paragraph 2 concerns, in particular, the implementation and further development of (a) international legal norms concerning compensation, or other relief, for harm resulting from violations of the present draft articles and (b) procedures and mechanisms for the assessment of harm and payment of compensation. These objectives could be accomplished through bilateral, regional or multilateral meetings and instruments designed to facilitate the provision of appropriate remedies for harm to persons, property or the environment. Such efforts by watercourse States should be aimed at eliminating any substantive or procedural obstacles to redress through courts or administrative bodies and at assuring the availability of compensation through such devices as compulsory insurance or funds for the indemnification of injured parties. The phrase "or

^{103/} As used here, the expression "injunctive relief" includes an order that an activity not commence operation or that it be halted, or that measures be taken to clean up pollution or rehabilitate damaged property, ecosystems or plant or animal life. The term "injunction" has been defined as a judicial order "operating in personam, and requiring [the] person to whom it is directed to do or refrain from doing a particular thing". (Black's Law Dictionary, 4th ed. (1951), p. 923)

^{104/} See paragraph (4) of the comments to draft article 2 above.

other relief" is intended to include not only injunctive relief of the kind described above but also environmental rehabilitation 105/ and clean-up.

Article 4

Equal right of access

1. A watercourse State of origin shall ensure that any person in another State who has suffered appreciable harm or is exposed to a significant risk thereof receives treatment that is at least as favourable as that afforded in the watercourse State of origin in cases of domestic appreciable harm, and in comparable circumstances, to persons of equivalent condition or status.

2. The treatment referred to in paragraph 1 of this draft article includes the right to take part in, or have resort to, all administrative and judicial procedures in the watercourse State of origin which may be utilized to prevent domestic harm or pollution, or to obtain compensation for any harm that has been suffered or rehabilitation of any environmental degradation.

Comments

(1) Paragraph 1 is based upon paragraph 4 (a) of the OECD Council Recommendation on Implementation of a régime of equal right of access and non-discrimination in relation to transfrontier pollution of 17 May 1977, which provides as follows:

"Countries of origin should ensure that any person who has suffered transfrontier pollution damage or is exposed to a significant risk of transfrontier pollution, shall at least receive equivalent treatment to that afforded in the country of origin in cases of domestic pollution and in comparable circumstances, to persons of equivalent condition or status ..." 106/

(2) Similar rights are guaranteed by article 3 of the Nordic Convention on the Protection of the Environment, which provides as follows:

"Any person who is affected or may be affected by a nuisance caused by environmentally harmful activities in another Contracting State shall have the right to bring before the appropriate Court or Administrative Authority of that State the question of the permissibility of such activities, including the question of measures to prevent damage, and to appeal against the decision of the Court or the Administrative Authority to the same extent and on the

105/ The term "rehabilitation" is discussed in the comments to draft article 4, below.

106/ OECD Implementation recommendation (supra, note 98), in OECD and the Environment (supra, note 98), at p. 152.

same terms as a legal entity of the State in which the activities are being carried out.

"The provisions of the first paragraph of this article shall be equally applicable in the case of proceedings concerning compensation for damage caused by environmentally harmful activities. The question of compensation shall not be judged by rules which are less favourable to the injured party than the rules of compensation of the State in which the activities are being carried out." 107/

(3) As in the case of draft articles 2 and 3 of the present annex, the reference to appreciable harm "in other States" indicates that it is not only such harm in other watercourse States for which recourse must be made available. 108/

(4) Paragraph 2 is based upon paragraph 4 (b) of the OECD Council Recommendation on Implementation of a régime of equal right of access and non-discrimination in relation to transfrontier pollution of 17 May 1977, 109/ which provides as follows:

107/ Nordic Convention (supra, note 101), article 3. See also the 1978 UNEP principles of conduct in the field of the environment ... (supra, note 25), principle 14:

"States should endeavour, in accordance with their legal systems and, where appropriate, on a basis agreed by them, to provide persons in other States who have been or may be adversely affected by environmental damage resulting from the utilization of shared natural resources with equivalent access to and treatment in the same administrative and judicial proceedings, and make available to them the same remedies as are available to persons within their own jurisdictions who have been or may be similarly affected."

108/ The reader is referred to the explanations in paragraph (4) of the comments to article 2 and paragraph (3) of the comments to article 3 of this annex.

109/ OECD Implementation recommendation (supra, note 98) in OECD and the Environment (supra, note 98), at p. 152.

For a case allowing a citizen of another country to take part in administrative proceedings in a country of origin, see the decision of the Federal Administrative Court of the Federal Republic of Germany of 17 December 1986 in the Emsland case, Neue Juristische Wochenschrift 1984, p. 1154. In that case, the Court allowed a Dutch citizen to have access to administrative proceedings in the Federal Republic. The proceedings concerned whether to authorize the construction of a nuclear power plant (the "Emsland" plant) on the German side of the border, 25 kilometres from the plaintiff's residence in the Netherlands. The plaintiff challenged the adequacy of the plant's safety and precautionary measures. According to a report on the decision, the Court observed that "States are under an obligation to prevent, reduce and control pollution to avoid injury to foreign

"From a procedural standpoint, this treatment includes the right to take part in, or have resort to, all administrative and judicial procedures existing within the country of origin, in order to prevent domestic pollution, to have it abated and/or to obtain compensation for the damage caused."

(5) The term "rehabilitation" is used in reference to the environment since "restoration" of the environment, in the strict sense, would not be possible. ^{110/} The term would include, for example, clean-up of petroleum or chemical spills, treatment of wildlife affected by such spills and restoration to the extent practicable of natural systems, including habitat and spawning grounds. Where it is not feasible or desirable for the operator of the harmful activity to carry out rehabilitation in the territory of the affected State, other alternatives, such as indemnification for the costs incurred by affected persons or entities in that State, should be available.

Article 5

Provision of information

1. A watercourse State of origin shall take appropriate measures to provide persons in other States who are exposed to a significant risk of appreciable harm

(continued)

territory; therefore, when authorizing nuclear power stations in a frontier area, authorities must be sure to implement the high standards of the [German] Atomic Energy Act in consideration of foreign interests. Granting an equal right of access is one more way of ensuring the fulfilment of this obligation of international customary law." (Flormann, "Nuclear Power Plant at the Border: The Right of a Netherlands Citizen before the Administrative Court of West Germany", Transboundary Resources Report, vol. 3, No. 3 (winter 1989), p. 4, at p. 59)

^{110/} A case recently brought before the International Court of Justice involves a claim by Nauru

"that Australia, through its failure to make any provision ... for the rehabilitation of the phosphate lands worked out under Australian administration ..., failed to comply with the international standards recognized as applicable in the implementation of the principle of self-determination". Case Concerning Certain Phosphate Lands in Nauru (Nauru v. Australia), Application (filed 19 May 1989), para. 45, at p. 30 (emphasis added). In addition to self-determination, Nauru based its claim on theories of abuse of rights (*ibid.*, para. 47) and denial of justice (*ibid.*, para. 46). Nauru claims, *inter alia*, that Australia is under a duty of restitution which "extends to the restoration of those parts of the island ... to a reasonable condition for habitation by the Nauruan people as a sovereign nation". (Application, para. 49, at p. 30 (emphasis added))

with sufficient information to enable them to exercise in a timely manner the rights referred to in paragraph 2 of this draft article. To the extent possible under the circumstances, such information shall be equivalent to that provided in the watercourse State of origin in comparable domestic cases.

2. Watercourse States shall designate one or more authorities which shall receive and disseminate the information referred to in paragraph 1 in sufficient time to allow meaningful participation in existing procedures in the watercourse State of origin.

Comments

(1) The draft article is designed to contribute to the implementation of the principles of non-discrimination and equal treatment. Without information, it will not be possible for actually or potentially affected persons in other States to identify, and seek relief from, the source of their injuries. The importance of access to information is recognized, inter alia, in a set of preliminary draft rules on compensation for damage resulting from dangerous activities that has been prepared under the auspices of the European Committee on Legal Co-operation (CDCJ) of the Council of Europe. 111/ These rules provide for access by "any person" to information held by public authorities or by any operator of a dangerous activity, inter alia, where such information is necessary to the establishment of a claim for compensation under the rules. 112/ Certain restrictions apply in the case of both public authorities and operators. The rationale for affording injured persons access to information held by public authorities and operators was stated in part as follows:

"Persons who have suffered ... damage would be in a better position to assess the extent of such damage and to ascertain a causal link if they had access to the information on the environment held by public authorities." 113/

111/ Council of Europe document CDCJ (89) 60. The draft rules and the accompanying commentary were prepared by the Committee of Experts on Compensation for Damage caused to the Environment (CJ-EN).

112/ Draft rules 11 (Access to information held by administrative authorities) and 12 (Access to information held by operators) (ibid., pp. 29 and 30. These rules, especially rule 12, are characterized in the report as "a first attempt to reconcile various ideas put forward within the committee and the working group ..." (ibid., p. 15).

113/ Ibid., p. 15. "[S]ome experts considered it more appropriate to entrust an environment protection agency with the task of collecting any information relevant to the establishment of the facts of a case and of placing such information at the disposal of the courts and of the parties concerned." (ibid.) While such a proposal may be a sound one, not all watercourse States would have established such an agency, and it would go beyond the scope of the present draft articles to require the establishment of one.

/...

(2) Paragraph 1 is based upon paragraph 9 (a) of the OECD Council Recommendation on Implementation of a régime of equal right of access and non-discrimination in relation to transfrontier pollution of 17 May 1977, 114/ which provides as follows:

"Countries of origin should take any appropriate measures to provide persons exposed to a significant risk of transfrontier pollution with sufficient information to enable them to exercise in a timely manner the rights referred to in this Recommendation. As far as possible, such information should be equivalent to that provided in the country of origin in cases of comparable domestic pollution." 115/

The expression "persons in other States" is used in the same sense as in previous articles of the present annex.

(3) Paragraph 2 is based upon paragraph 9 (b) of the OECD Council Recommendation on Implementation of a régime of equal right of access and non-discrimination in relation to transfrontier pollution of 27 May 1977, 116/ which provides as follows:

"Exposed countries 117/ should designate one or more authorities which will have the duty to receive and the responsibility to disseminate such information within limits of time compatible with the exercise of existing procedures in the country of origin."

Article 6

Jurisdictional immunity

1. A watercourse State of origin shall enjoy jurisdictional immunity in respect of proceedings brought in that State by persons injured in other States only in so far as it enjoys such immunity in respect of proceedings brought by its own nationals and habitual residents.

2. Watercourse States shall ensure, by the adoption of appropriate measures, that their agencies and instrumentalities act in a manner consistent with these draft articles.

114/ OECD Implementation recommendation (supra, note 98), in OECD and the Environment (supra, note 98), at p. 153.

115/ Ibid.

116/ Ibid.

117/ The term "exposed country" is defined as "any country affected by transfrontier pollution or exposed to a significant risk of transfrontier pollution." (ibid., at p. 151)

Comments

(1) This article is based on the principle of non-discrimination. It would ensure that those harmed by State-owned or -operated activities have the same rights to redress from those entities whether they live, or operate, in the watercourse State of origin or in another State. Paragraph 1 lays down this general rule. The term "proceedings" includes those in which the plaintiff or petitioner seeks "measures of constraint", as that expression is used in part IV of the Commission's draft articles on jurisdictional immunities of States and their property. 118/

(2) As used in this article, the expression "watercourse State of origin" includes not only the organs of that State, but also its agencies, companies and other instrumentalities. It is used in the same sense as the term "State" in the draft articles on jurisdictional immunities of States and their property. 119/ The expression "other States" is used in the same sense as in previous draft articles of this annex.

(3) The expression "nationals and habitual residents" refers to natural and legal persons residing or doing business in the watercourse State of origin. The expression "habitual residence" is used in the Hague Conventions on Private International Law to harmonize the meaning of the concept of "domicile" in the various civil law and common law countries that participate in the agreements.

(4) Paragraph 2 is based upon article 236 of the 1982 United Nations Convention on the Law of the Sea. Entitled "Sovereign immunity", article 236 provides:

118/ Yearbook ... 1986, vol. II (Part Two), p. 11, document A/41/10, para. 22. Another approach would be to add a separate paragraph dealing with measures of constraint. Such a paragraph might read as follows:

"1 bis. A watercourse State of origin shall enjoy jurisdictional immunity in respect of proceedings brought in that State by persons injured in other States, in which those persons seek measures of constraint, only in so far as it enjoys such immunity when such measures are sought by nationals or habitual residents of the State that owns or operates them."

The Special Rapporteur considers this approach somewhat cumbersome and therefore decided simply to make clear in the commentary that the term "proceedings" includes those in which measures of constraint are sought against the watercourse State of origin.

119/ See the "Interpretative provision" concerning the term "State" in article 3, paragraph 1, of the Commission's draft articles on jurisdictional immunities of States and their property, adopted on first reading in 1986, Yearbook ... 1986, vol. II (Part Two), p. 9, document A/41/10, para. 22.

"The provisions of this Convention regarding the protection and preservation of the marine environment do not apply to any warship, naval auxiliary, other vessels or aircraft owned or operated by a State and used, for the time being, only on government non-commercial service. However, each State shall ensure, by the adoption of appropriate measures not impairing operations or operational capabilities of such vessels or aircraft owned or operated by it, that such vessels or aircraft act in a manner consistent, so far as is reasonable and practicable, with this Convention."

While the purpose of paragraph 2 is not identical with that of article 236, both provisions emphasize the importance of efforts by States to ensure that their agencies and instrumentalities comply with the obligations in question. Unlike article 236, however, paragraph 2 applies even where the agency or instrumentality involved would enjoy jurisdictional immunity. While the need for such a provision is perhaps greater where jurisdictional immunity exists, it does not necessarily follow from the lack of such immunity that State entities will act consistently with their obligations or that persons injured in other States will obtain relief. There are a number of potential obstacles to obtaining relief even in the absence of immunity - such as the cost of bringing proceedings, gathering evidence and the establishment of causation ^{120/} - which may have the same ultimate effect as a rule of immunity itself. This points up the importance of prevention, which is the province of the watercourse State of origin. For these reasons, it does not seem necessary or desirable to confine the obligation set forth in paragraph 2 to situations in which immunity exists.

^{120/} See, generally, McCaffrey, "Expediting the Provision of Compensation to Accident Victims", in The Transfer of Hazardous Substances and Technology: The International Legal Challenge, G. Handl and R. Lutz, eds., (1990); and idem, "Accidents Do Happen: Hazardous Technology and International Tort Litigation", the Transnational Lawyer, vol. 1 (1988), p. 41.

These kinds of problems - together, in some cases, with the spectre of sovereign immunity - probably explain the tendency of aggrieved individuals in recent cases to bring claims against their own governmental authorities for relief from foreign-source pollution. See, e.g., Rey und Leimgruber v. Schweizerische Eidgenossenschaft, Appellationshof des Kantons Bern, 1. Zivilkammer, 31 May 1989 (upholding liability of the Federal Government of Switzerland for damage to plaintiff's vegetable business due to radiation from the Chernobyl nuclear incident); and a case brought by an individual and the city of Lübeck in the Federal Republic of Germany against competent Federal Republic authorities in Federal Republic courts, seeking relief from apprehended contamination of drinking water by transfrontier ground-water pollution emanating from the Schoenberg waste dump in the German Democratic Republic. The case is discussed in Nunez-Mueller, "Transfrontier Movements of Hazardous Waste - 'Forum Shopping' between East and West", forthcoming in Natural Resources Journal, vol. 5.

(5) As used in paragraph 2, the expression "agencies or instrumentalities" includes companies owned or operated by the watercourse State of origin. The reader is also referred in this connection to paragraph (2) of the comments to this article.

(6) It is perhaps appropriate to address briefly the relationship between this draft article and the draft articles on jurisdictional immunities of States and their property. Article 13 of those draft articles concerns "Personal injuries and damage to property". As adopted on first reading, article 13 provides in relevant part that:

"the immunities of a State cannot be invoked before a court of another State ... in a proceeding which relates to compensation for death or injury to the person or damage to or loss of tangible property if the act or omission which is alleged to be attributable to the State and which caused the death, injury or damage occurred in whole or in part in the territory of the State of the forum and if the author of the act or omission was present in that territory at the time of the act or omission." ^{121/}

The draft articles on jurisdictional immunities, of course, deal only with the immunity of a State from the jurisdiction of the courts of another State. They are thus not applicable to the present annex, under which any proceeding involving the watercourse State of origin that was initiated by persons injured outside that State would be brought before the State's own courts or administrative bodies. The proposition might be advanced, however, that the same policy that support non-immunity in cases covered by draft article 13 would also support it in cases under the present annex. That policy seems to be that injured individuals should not be left "without recourse to justice" by reason of the jurisdictional immunity of the "author" State. ^{122/} In the present context, this would suggest that if a citizen of State B were injured in that State by, e.g., pollution deposited into an international watercourse in State A by a company of State A, that person should be able to bring proceedings against State A in its own courts or tribunals to recover for the injury. Draft article 6 does not go this far, however. It requires only that any recourse against the organs, companies or other entities of the watercourse State of origin that is available to its own citizens and habitual residents also be available to persons injured outside that State. It may be that there is little distinction in principle between foreseeably causing an injury in State A by an act or omission in that State, and foreseeably causing an injury in State B by an act or omission in State A; but without the benefit of some direction from the Commission, the Special Rapporteur is reluctant to propose that watercourse States of origin be subject to the jurisdiction of their own courts and tribunals in proceedings brought by injured foreign persons, even if they would

^{121/} Yearbook ... 1986, vol. II (Part Two), p. 10, document A/41/10, para. 22.

^{122/} See paragraph (3) of the commentary to what was then numbered article 14 of the draft articles on jurisdictional immunity, in Yearbook ... 1984, vol. II (Part Two), p. 66, document A/39/10.

enjoy jurisdictional immunity in proceedings brought by their own citizens. This reluctance also stems from the decision of the Commission to exclude from the application of article 13 of the draft articles on jurisdictional immunities "cases of transboundary injuries or transfrontier torts or damage, such as letter-bombs or export of explosives, fireworks or dangerous substances which could explode or cause damage ...". ^{123/} However, the commentary to article 13 recognizes that "a court foreign to the scene of the delict might be considered as a forum non conveniens. The injured individual would have been without recourse to justice had the ['author'] State been entitled to invoke its jurisdictional immunity." ^{124/} Thus it is possible that the only recourse of a person in State B injured by an act or omission of watercourse State of origin A would be to attempt to convince State B to espouse his or her claim against State A. As explained in the introduction to the present annex, it is precisely this kind of politicization of disputes that the procedures under the annex are designed to avoid. The Special Rapporteur would welcome the views of members of the Commission on this point, in particular.

^{123/} Paragraph (7) of the Commission's commentary to article 13, Yearbook ... 1984, vol. II (Part Two), p. 67, document A/39/10. While the text of draft article 13 does not require that the injury have been sustained in the forum State, paragraph (7) of the commentary to that article leaves no doubt on the question.

^{124/} Ibid., at p. 66, para. (3).